



Natural Resources Conservation Service In cooperation with Illinois Agricultural Experiment Station

Soil Survey of La Salle County, Illinois



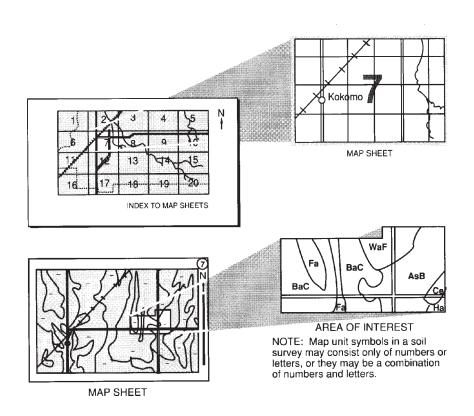
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Illinois Agricultural Experiment Station. It is part of the technical assistance furnished to the La Salle County Soil and Water Conservation District. Additional funding was provided by the Illinois Department of Agriculture and the La Salle County Board.

Major fieldwork for this soil survey was completed in 2004. Soil names and descriptions were approved in 2006. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2004. The most current official data are available on the Internet.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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Cover Photo Caption

Historic Starved Rock, in Starved Rock State Park, along the Illinois River in La Salle County, Illinois.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

William J. Gradle
State Conservationist
Natural Resources Conservation Service

Soil Survey of La Salle County, Illinois

By Jeffrey A. Deniger, Natural Resources Conservation Service

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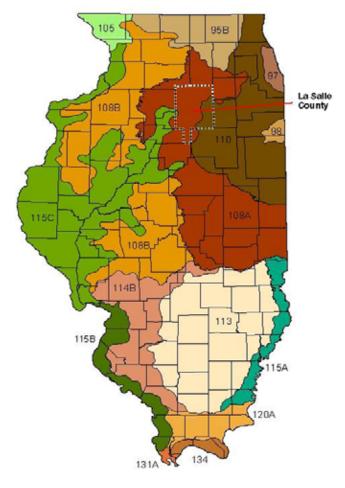
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United States Department of Agriculture, Natural Resources Conservation Service,

in cooperation with the Illinois Agricultural Experiment Station

LA SALLE COUNTY is in northeastern Illinois (fig. 1). It is the second largest county in the State. It has a land area of 735,640 acres, or 1,149 square miles. In 2000, the population of the county was 111,509 (U.S. Department of Commerce, 2000). Ottawa, the county seat and the largest city, is along the Illinois River almost in the center of the county. The county is bordered by Lee and De Kalb Counties to the north, Kendall and Grundy Counties to the east, Livingston and Woodford Counties to the south, and Marshall, Putnam, and Bureau Counties to the west.

The survey area is a subset of Major Land Resource Areas (MLRAs) 110, Northern Illinois and Indiana Heavy Till Plain, and 108A, Illinois and Iowa Deep Loess and Drift, Eastern Part (USDA/NRCS, 2006).



LEGEND

95B—Southern Wisconsin and Northern Illinois Drift Plain

97—Southwestern Michigan Fruit and Truck Crop Belt

98—Southern Michigan and Northern Indiana Drift Plain

105-Northern Mississippi Valley Loess Hills

108A and 108B—Illinois and Iowa Deep Loess and Drift

110-Northern Illinois and Indiana Heavy Till Plain

113—Central Claypan Areas

114B—Southern Illinois and Indiana Thin Loess and Till Plain, Western Part

115A, 115B, and 115C—Central Mississippi Valley Wooded Slopes

120A—Kentucky and Indiana Sandstone and Shale Hills and Valleys, Southern Part

131A—Southern Mississippi River Alluvium

134—Southern Mississippi Valley Loess

Figure 1.—Location of La Salle County and the major land resource areas (MLRAs) in Illinois.

This survey updates the survey of La Salle County published in 1972 (Alexander, 1972). The updated survey provides additional information and has orthophotographic maps at a slightly larger scale, both in electronic and digital format. Some of the information from the 1972 survey has been incorporated in this publication with little alteration.

General Nature of the Survey Area

This section provides general information about the survey area. It describes history; physiography, relief, and drainage; natural resources; agriculture; transportation facilities; industry; and climate.

History

The first Europeans to enter the survey area were the French explorers Marquette and Joliet, who traveled along the Illinois River in 1673. Soon after that, another French explorer, Robert Cavelier, sieur de La Salle, for whom the county was named, sailed down the Mississippi River from Canada to the Gulf of Mexico and claimed the region for France. La Salle and two other French traders returned to the area a few years later. They built Fort Crevecoeur on the Illinois River near Peoria in 1680 and Fort St. Louis on Starved Rock in 1682.

The Illinois Indians were the primary Indians in the survey area, but many tribes inhabited the area at various times. During the time of La Salle's arrival, the Illinois tribe had a large village near Utica. The murder of Pontiac by an Illinois Indian years later set the northern tribes in motion against the Illinois, and in the ensuing wars the latter were reduced to a fraction of their former strength. During these wars, a group of Illinois Indians retreated to the area where Fort St. Louis had stood in search of protection. Unable to secure provisions, they died of starvation or were killed; thus, this location became known as Starved Rock.

La Salle County was originally part of Putnam County, which had been established in 1825. On January 15, 1831, the original Putnam County was reorganized by a legislative act that established Cook, Putnam, and La Salle Counties. At that time La Salle County covered parts of present-day Kendall, Livingston, and Marshall Counties and all of present-day Grundy County. The current boundaries of La Salle County were established in 1843.

The Illinois and Michigan Canal, built between 1836 and 1848, stretched approximately 100 miles from Chicago to La Salle-Peru in La Salle County. Opened in 1848, the canal provided a link between the eastern and western parts of the country. It linked the waters of Lake Michigan with those of the Illinois and Mississippi Rivers and eventually the Gulf of Mexico. Many communities sprang up along the canal's route. In La Salle County, these included Seneca, Marseilles, Ottawa, Utica, and La Salle-Peru. With the opening of the Rock Island Railroad's mainline in 1853, the canal's importance was reduced. Today the Illinois and Michigan Canal is used for recreational purposes.

La Salle County is the birthplace of James Butler "Wild Bill" Hickok. Hickok was born in 1837 in Troy Grove, Illinois. He worked on the family farm until 1856, when he headed for the western territory into fame and folklore.

In August 1858, La Salle County was the site of another historical event, the first of the famous Lincoln-Douglas debates at Ottawa, Illinois (fig. 2). Around 10,000 people heard the two candidates for the U.S. Senate discuss the question of slavery.

Physiography, Relief, and Drainage

Almost all of La Salle County is in the Bloomington Ridged Plain of the Central Lowland Province (Leighton and others, 1948). A small area in the southwestern part of the county is part of the Kankakee Plain of the Central Lowland Province.

The Bloomington Ridged Plain consists mainly of till of Wisconsinan age. It is characterized by low, broad morainic ridges with intervening wide stretches of

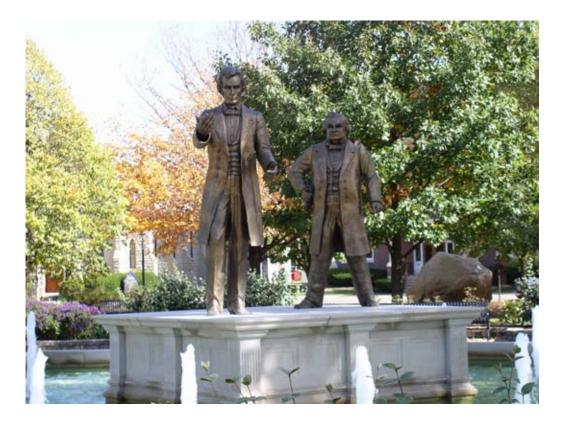


Figure 2.—Washington Square in Ottawa, Illinois, is the site of the first of the famous debates between Abraham Lincoln and Stephen A. Douglas.

relatively flat or gently undulating ground moraines. The moraines form a series of curves roughly concentric with the outer boundary of the county. The named moraines in La Salle County, from north to south, include La Molle, Paw Paw, Arlington, Mendota, Farm Ridge, Mt. Palatine, Minonk, Norway, and Ransom (Willman and Frye, 1970).

The Illinois River has cut a relatively deep, narrow valley through the Norway, Ransom, and Farm Ridge moraines and into the underlying bedrock for practically its whole length through the county.

The highest elevation in La Salle County is about 910 feet in the vicinity of Welland in the northwestern part of the county (fig. 3). The lowest elevation is about 445 feet in the Illinois River valley where the river exits the county near the City of La Salle-Peru.

Most of La Salle County is drained by the Illinois River and its tributaries, the Fox, Vermilion, and Little Vermilion Rivers. The Illinois River flows into the Mississippi River, which empties into the Gulf of Mexico.

Natural Resources

La Salle County has significant natural resources, ranging from construction materials to surface water or ground water deposits. As of 1992, La Salle County ranked 8th in the State on the basis of all minerals extracted, processed, and manufactured (Nelson and others, 1997).

Silica sand from the St. Peter sandstone formation is mined near Ottawa along the Illinois and Fox Rivers. St. Peter sandstone, which is nearly pure silica, is used for making glass and molding sand and for a wide variety of silica chemical products (fig. 4).

Sand and gravel deposits occur in many parts of the county, but they are especially numerous in the outwash and terrace areas along major streams and some of the minor streams. The county has several sand and gravel pits, some of which are located along the Fox River near Sheridan.

Dolostone and limestone are prevalent along the Illinois and Vermilion Rivers and are quarried at several places. Much of this rock is crushed for use as aggregate material in concrete, agricultural limestone, or road surfaces.

Clay is mined extensively in the county. La Salle County was the second leading producer of common clay in the State in 1992. The clay is used for the manufacture of bricks, drain tile, dinnerware, and cement.

Coal is no longer mined in the county. At one time, however, coal mining was a major industry, and both surface mines and shaft mines were common. Much of the mining took place in areas on the bluffs along the Illinois River and around Streator.

Surface water and underground water supplies are relatively abundant in La Salle County. The Illinois, Fox, and Vermilion Rivers are continuously flowing streams and important surface water resources in the county. They are used for industry and recreation. The county has an abundant supply of ground water for industrial,

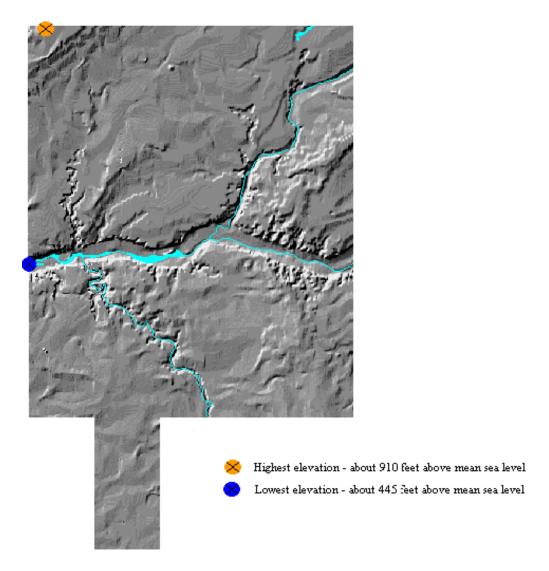


Figure 3.—A generalized relief map of La Salle County, Illinois. (Source: Illinois State Geological Survey, http://www.isgs.uiuc.edu/hi_low/hilow_intro.html)



Figure 4.—The St. Peter sandstone formation viewed from an abandoned silica mine in Buffalo Rock State Park.

municipal, and domestic purposes. Supplies of water may be obtained from the St. Peter and other deeper sandstone aquifer formations at depths ranging from near the surface to more than 2,000 feet. Smaller amounts of water for domestic purposes can be obtained from wells at depths around 50 to 500 feet.

Agriculture

Like much of Illinois, La Salle County has some very fertile farmland. Agriculture has been the dominant land use for decades; in 2002, 70 percent of the land area was still used for agriculture. Corn, soybeans, small grain crops, and nursery and greenhouse crops accounted for 86 percent of the market value of agricultural products sold in 1997, and livestock, poultry, and related products accounted for 14 percent. Other specialty crops, including sweet corn, peas, and lima beans, are grown on a small acreage (less than 10,000 acres) (U.S. Department of Commerce, 2002).

Although the farm product market value is increasing in the area, the number of farms and the number of acres farmed have been declining. In 1970, there were 2,481 farms totaling 637,617 acres. In 2002, there were 1,478 farms on 579,141 acres. These figures represent about a 40 percent decline in the number of farms and a 9 percent decrease in the number of acres farmed. This decline, however, has been counteracted by a large increase in average farm size. In 1970, there were 2,481 farms averaging 257 acres in size; in 2002, the average size of the remaining 1,478 farms was 392 acres. These figures represent about a 53 percent increase in average farm size (U.S. Department of Commerce, 2002).

Transportation Facilities

La Salle County has a well developed system of roads. The county is served by Illinois State Highways 17, 18, 23, 71, 251, 351, 178, and 170; U.S. Highways 6, 34,

51, and 52; and Interstate Highways 39 and 80. La Salle County also has a well integrated county highway system, mostly hard-surfaced or graveled roads, providing connections between incorporated and unincorporated areas.

La Salle County also has water transportation. The county owes much of its start and early growth to the Illinois and Michigan Canal, built in 1848 and now used for recreation. The Illinois River is suitable for heavy barge traffic and recreational boating. Locks are located at both Marseilles and Starved Rock.

The rail lines of four major railroad companies serve the county and connect it to all parts of the United States. Passenger rail service is available from the survey area to most of the United States.

La Salle County is served by the Illinois Valley Regional Airport in Peru. The county is also within a relatively short distance from Midway and O'Hare International Airports in Chicago. Eight private airports serve local recreational and business flying needs; however, they do not support commercial flights or large jets.

Industry

La Salle County has a strong traditional economic base that includes manufacturing, health care, retail sales, construction, education, and administrative jobs. The employment trend in the county continues to follow the national averages, with employment moving from manufacturing towards a more service-based economy. Housing construction is very important in nearly all parts of the county. Sand, gravel, and limestone are mined for glass manufacture, concrete, and other purposes. Other businesses and industries have developed in most county municipalities and account for many of the traditional manufacturing jobs. Major industrial development areas are in Marseilles, Ottawa, La Salle-Peru, and Streator (fig. 5).

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Ottawa in the period 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.



Figure 5.—Mining for silica sand from the St. Peter sandstone formation. The sand is used to make glass.

In winter, the average temperature is 26.3 degrees F and the average daily minimum temperature is 17.9 degrees. The lowest temperature on record, which occurred at Peru on January 19, 1985, is -26 degrees. In summer, the average temperature is 73.1 degrees and the average daily maximum temperature is 83.8 degrees. The highest temperature, which occurred at Ottawa on July 14, 1936, is 112 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is 35.68 inches. Of this total, about 25.06 inches, or about 70 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest recorded 1-day rainfall was 8.77 inches at Ottawa on July 14, 1958. Thunderstorms occur on about 48 days each year, and most occur from April through September.

The average seasonal snowfall is 24.3 inches. The greatest snow depth at any one time during the period of record was 30 inches recorded on February 1, 1979. On an average, 44 days per year have at least 1 inch of snow on the ground.

The average relative humidity in midafternoon is about 61 percent. Humidity is higher at night, and the average at dawn is about 83 percent. The sun shines 60 percent of the time possible in summer and 53 percent in winter. April has the most sunny days (65 percent). The prevailing wind is from the south. Average windspeed is highest, 12 miles per hour, in March.

How This Survey Was Made

Soil surveys are updated as part of maintenance projects that are conducted for a major land resource area or other region. Maintaining and coordinating soil survey information within a broad area result in uniformly delineated and joined soil maps and in coordinated interpretations and map unit descriptions for areas that have similar physiography, climate, and land use.

Updated soil survey information is coordinated within the major land resource area or other region and meets the standards established and defined in the memorandum of understanding. Soil surveys that are consistent and uniform within a broad area enable the coordination of soil management recommendations and a uniform program application of soil information.

This survey was made to provide updated information about the soils and miscellaneous areas in the survey area, which is in Major Land Resource Areas 108A and 110 (fig. 1). Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA/NRCS, 2006). La Salle County is a subset of MLRAs 108A and 110. Map unit design and the detailed soil descriptions are based on the occurrence of each soil throughout the MLRAs. In some cases a soil may be referred to that was not mapped in the La Salle County subset but that is representative of the MLRAs.

The information in this survey includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses.

Soil scientists observed the steepness, length, and shape of the slopes; the degree of erosion; the general pattern of drainage; and the kinds of crops and native plants. They made borings and dug holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is

devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landform merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries. After soil scientists located and identified the significant natural bodies of soil in the survey area, they then drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit.

Fieldwork in the La Salle County soil survey update consisted primarily of soil transects conducted by soil scientists. Soil transects are a systematic method of sampling a specific soil type. Soil borings are taken at regular intervals. Soil scientists then record the characteristics of the soil profiles that they study. They note soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. This information can be used to run statistical analyses for specific soil properties. The results of these analyses, along with other observations, enable the soil scientists to assign the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

From 2004 through 2005, the original La Salle County field mapping sheets were recompiled using U.S. Geological Survey (USGS) digital aerial black and white orthophotographs taken in 1998, 1999, and 2001 as base maps. The original maps for La Salle County dated from 1939, 1953, 1954, and 1958, and the soil mapping work was done in the late 1950s and early 1960s. Soil scientists used USGS topographic maps and the new orthophotographs to relate land and image features. Adjustments of soil boundary lines from the original field maps were made to coincide with the USGS topographic map contour lines and tonal patterns on aerial photographs. Aerial photographs also show trees, buildings, fields, roads, lakes, and rivers, all of which help in locating soil boundaries accurately. After compilation was completed, the new maps were scanned and digitized and checked for quality and accuracy.

The descriptions, names, and delineations of the soils in this survey may not fully agree with those of the soils in adjacent survey areas. Differences are the result of an improved knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Formation and Classification of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the system of soil classification.

Formation of the Soils

Soil forms through processes that act on deposited geologic material. The major factors of soil formation are the physical and mineralogical composition of the parent material; the climate in which the soil formed; the plant and animal life on and in the soil; the relief; and the length of time the processes of soil formation have acted on the parent material (Jenny, 1941). These factors are all interrelated and work in conjunction with each other to produce soil.

Climate and plant and animal life are the predominant active factors of soil formation. They act directly on the parent material, either in place or after it has been moved from place to place by water, wind, glaciers, or human activity, and slowly change it into a natural body that has genetically related horizons. Relief modifies soil formation and can inhibit soil formation on the steeper, eroded slopes and in wet, depressional or nearly level areas by controlling the moisture status of soils. Finally, time is needed for changing the parent material into a soil that has differentiated horizons.

Parent Material

Parent material is the unconsolidated organic and mineral material in which soils form. The soils of La Salle County were derived from parent materials that were directly or indirectly impacted by the Pleistocene or Ice Age. Four different glacial stages were responsible for most of the parent material in the county. These are the Nebraskan, Kansan, Illinoian, and Wisconsinan glaciations; the Wisconsinan has had the most impact. The Wisconsinan glaciation produced end moraines and ground moraines that control the nature of the land surface in most of the county. Parent materials in La Salle County include till; glacial outwash; loess, or silty material; lacustrine material; organic deposits; alluvium; and bedrock.

Till is unsorted, ice-deposited sediment composed of a matrix of silt, clay, and sand, in which pebbles, cobbles, and boulders are embedded. La Salle County is made up of two till members of the Lemont Formation of the Wedron Group. The Yorkville till member comprises two-thirds of the county, and the Undivided till member, which is a mix of several types of till, is in the northwestern part of the county (Hansel and Johnson, 1996). The Yorkville till member is dark gray and gray, silty clay to silty clay loam till that oxidizes to olive brown. The Undivided till member is a loam to silty clay loam till that oxidizes to olive brown or yellowish brown, but it can be mixed with the Tiskilwa Formation, which oxidizes to reddish gray or reddish brown.

Tills in La Salle County may be divided into three general groups, according to the proportions of gravel, sand, silt, and clay. Differences in these proportions are reflected in the texture and permeability of the tills, which, in turn, have influenced and continue to influence soil development. Danabrook and Mayville soils formed in loam till that is moderately slowly permeable to air and water. Varna and Elliott soils formed in silty

clay loam till that is slowly permeable to air and water. Plant roots do not readily penetrate more than a few inches into these unleached tills. In silty clay tills, permeability is very slow and plant roots seldom penetrate the unleached till, except in cracks or along cleavage faces. Swygert and Rutland soils formed in silty clay till.

Outwash materials were deposited by water flowing at different rates down streams, across outwash plains, or into lakes. The variation in water flow resulted in strata of different textures and thickness. Outwash materials thus range from coarse, nearly clean gravel to very fine, nearly pure clay. Typically, they are mixtures of two or more particle sizes. In La Salle County the glacial outwash soils have three main textures: silt loam and loam, represented by Plano and Drummer soils; sandy loam and sand, represented by Alvin and Sparta soils; and sand and gravel, represented by Dresden and Lorenzo soils.

Loess is the silty wind-deposited parent material that blankets much of La Salle County. It originated in areas that were barren of vegetation and exposed to wind currents that could separate the fine particles from the coarser fragments. These areas were generally large areas of bottom land and valley trains of glacial rivers. In La Salle County the depth of the loess ranges from as much as 8 feet in the extreme northwestern part of the county to less than 2 feet in the eastern part. Because loess or similar silty material is dominantly at the surface, silt loam and silty clay loam are the most common textures in the surface layer of the soils in La Salle County.

Lacustrine material was deposited in the relatively still water of glacial lakes. After the coarser fragments were deposited as outwash by moving water, the finer particles, such as very fine sand, silt, and clay, settled in still water. Vertical variation is greater than horizontal variation. The strata in lacustrine deposits are commonly thicker than those in glacial outwash. Hartsburg and Rooks soils formed in lacustrine material.

Organic deposits consist of decomposed plant remnants. After the glaciers receded, water was left standing in depressions. As a result, these areas were very wet during the period when soil formation was taking place, and the decaying plant material accumulated more quickly than it decomposed. Most of these plant remains are decomposed to a point that they are unrecognizable. These organic deposits are called sapric material. Houghton and Lena soils are examples of soils that formed in these deposits.

Alluvium is sand, silt, or clay that has been deposited on flood plains or bottom land by flooding streams and rivers. Moundprairie and Sawmill soils are examples of alluvial soils in La Salle County.

Sandstone, shale, dolostone, and limestone bedrock is common along the Illinois, Fox, and Vermilion Rivers and their immediate tributaries. The bedrock varies widely in depth and makes up about 3 percent of the county. Outcrops are visible in stream bottoms and along many of the bluffs, especially in Starved Rock and Matthiessen State Parks and Mitchell Grove Nature Preserve (fig. 6). All of the bedrock types are quarried and are an important source of income in the county. Boone and Marseilles soils are moderately deep to bedrock.

Climate

La Salle County has a temperate, humid continental climate. The general climate has had an important overall influence on the characteristics of the soils; however, the climate is essentially uniform throughout the county and has not caused any major differences among the soils. Climate has very important effects on weathering, vegetation, and erosion.

The weathering of minerals in the soil increases as temperature and rainfall increase. In most years, this region has enough rainfall and melted snowfall to moisten all of the soil and underlying materials to the level of the permanent water table. The



Figure 6.—An exposure of sandstone bedrock in a stream in the Mitchell Grove Nature Preserve.

degree of saturation is variable, depending on thickness and permeability of unconsolidated materials, their water-holding capacity, and topography. In general, rainfall either percolates downward to underground outlets, evaporates, is transpired by plants, or moves across the land surface to streams, carrying with it material in solution and suspension. As water moves downward, clay is moved from the surface soil to the subsoil, where it accumulates. Salts of calcium, magnesium, potassium, and other bases, as well as various organic and inorganic colloids, also are formed. Some accumulate where formed, some are carried away in drainage waters, some are moved to other parts of the soil profile to help form soil horizons, and some are taken up by plants in the form of nutrients. The latter tend to be returned to the local soil area unless they are removed by animals or humans. Freezing and thawing help to break down rock fragments to smaller and smaller particles, and the action of sun and wind influences many phases of plant and animal life.

The climate in La Salle County has generally favored prairie grasses and hardwood forests. Spring rains and wind can cause extensive erosion in areas where crop residue, trees, and other vegetative cover have been removed from the surface. More soil will be lost through erosion each year than is formed by natural processes.

Living Organisms

Living organisms, including all associated plant and animal life, are responsible for the accumulation of organic matter in soils. Three major kinds of plants—tall prairie grasses, swamp and marsh grasses, and deciduous trees—were present when La Salle County was settled and presumably had been in the survey area for a long time. All three types of vegetation produced large amounts of organic matter. Forest debris accumulated primarily on the soil surface, where most of it decayed rapidly or was burned or eroded away. A relatively small amount was carried by soil organisms

into the upper 1 to 5 inches of mineral soil, where it was partially preserved. On the other hand, the organic matter that accumulated from the decaying fibrous root systems of prairie and swamp and marsh grasses was within the mineral soil and was well preserved.

In the virgin or uncultivated state, soils that developed under these types of vegetation have a dark surface layer as a result of an accumulation of organic matter. The dark layer is much thicker in prairie soils, typically ranging between 10 and 15 inches. Examples of soils that formed under prairie conditions are Muscatune and Elliott soils. In soils that formed under forest vegetation, the surface layer is generally 1 to 5 inches thick. Camden and Ozaukee soils are examples. Where the two types of vegetation were combined or where forest was encroaching on prairie, the surface layer is 5 to 10 inches thick. Examples of soils that formed in these transition areas are Frankfort and Harvard soils. Mucky soils typically have an accumulation of organic matter several feet deep and are dark throughout. Houghton and Lena soils are examples.

Bacteria, fungi, and other micro-organisms help to break down the organic material and thus provide nutrients for plants and other soil organisms. The stability of soil aggregates, which are structure units made up of sand, silt, and clay, is affected by microbial activity; cellular excretions from these organisms help to bind soil particles together. Stable aggregates help to maintain soil porosity and promote favorable relationships among soil, water, and air. Moreover, earthworms, crayfish, insects, and burrowing animals tend to incorporate organic material into the soil and help to keep soils open and porous.

Human activities also are important factors in La Salle County. Native vegetation was harvested, and the land was plowed. As slopes were cultivated, the soils were vulnerable to erosion and deposition. Wet soils have been drained and dry soils irrigated. Soils that were naturally acid have been altered by applications of crushed limestone, and fertilizer has been applied in areas where plant nutrients were depleted. Excavating, grading, and filling have covered the existing soil profile and caused a new cycle of soil formation to begin.

Topography

Relief, which includes elevation, topography, and water table levels, largely determines the natural drainage of soils. In La Salle County, the slopes range from 0 to 60 percent. Natural soil drainage ranges from excessively drained on the backslopes and summits to very poorly drained in depressions.

Relief affects the depth to the seasonal high water table or natural drainage of the soil by influencing infiltration and runoff rates. The poorly drained Drummer and Ashkum soils occur in low-lying, nearly level areas and have a water table close to the surface for most of the year. The soil pores contain water, which restricts the circulation of air in the soil. Under these conditions, iron and manganese compounds are chemically reduced. As a result, the subsoil is dull gray and mottled. In the more sloping, well drained Harvard and Camden soils, the water table is lower and some of the rainfall runs off the surface. The iron and manganese compounds are well oxidized. As a result, the subsoil is brown. Between these extremes or where the water table fluctuates slowly into and out of the soil profiles, the iron and manganese compounds are moderately well oxidized to imperfectly oxidized and colors are mixed or mottled.

Local relief also influences the severity of erosion. Even though some erosion occurs on all sloping soils, the hazard generally is more severe as the slope increases. The runoff and the removal of soil material on these slopes result in the formation of soils that have a thinner surface layer.

Time

Time is an important factor in soil formation. The longer the soils are exposed to weathering, the more distinctive are their horizons and profiles. Soil weathering and development cannot always be measured directly in years, however, because other factors determine the degree to which a profile develops within a given time. Because unconsolidated materials weather faster than solid bedrock, a soil profile that formed in till, for example, will reach a certain stage of development sooner than a soil profile that formed in bedrock. Yet the profile of each soil becomes more strongly weathered and developed with the passing of time.

Most of the soils in La Salle County began formation with the retreat of the last glacier about 12,500 years ago. On flood plains, however, material is deposited during each flood. This continual deposition slows development. Earth-moving activities and other human activities also continue to change the soils and thus slow soil development or even stop it completely.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 4 shows the classification of the soils in La Salle County. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquoll (*Aqu*, meaning water, plus *oll*, from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Endoaquolls (*Endo*, meaning within, plus *aquolls*, the suborder of the Mollisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Endoaquolls

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth,

and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, superactive, mesic Typic Endoaquolls.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Detailed Soil Map Units

In this section, arranged in alphabetical order, each major soil series recognized in the survey area is described. Each series description is followed by detailed descriptions of the associated soil map units.

Characteristics of the soil and the material in which it formed are identified for each soil series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2003). Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the headings "Use and Management of the Soils" and "Soil Properties."

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform

segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Elliott silty clay loam, 2 to 4 percent slopes, eroded, is a phase of the Elliott series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Casco-Rodman complex, 20 to 30 percent slopes, is an example.

An undifferentiated group is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarry, is an example.

Table 5 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

Alvin Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Alvin fine sandy loam, 2 to 5 percent slopes; at an elevation of 660 feet; 2,320 feet south and 1,760 feet east of the northwest corner of sec. 32, T. 21 N., R. 11 W.; Vermilion County, Illinois; USGS Danville NE topographic quadrangle; lat. 40 degrees 14 minutes 08 seconds N. and long. 87 degrees 36 minutes 58 seconds W., NAD 27; UTM Zone 16, 447587E and 4454087N, NAD 83:

- Ap—0 to 8 inches; brown (10YR 4/3) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; moderately acid; abrupt smooth boundary.
- BE—8 to 11 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; very friable; few distinct grayish brown (10YR 5/2) silt coatings on faces of peds; moderately acid; clear smooth boundary.

- Bt1—11 to 15 inches; dark yellowish brown (10YR 4/4) fine sandy loam; moderate fine subangular blocky structure; friable; few distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—15 to 25 inches; dark yellowish brown (10YR 4/4) fine sandy loam; moderate medium subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; strongly acid; clear smooth boundary.
- E and Bt—25 to 74 inches; yellowish brown (10YR 5/4) loamy fine sand (E); weak medium subangular blocky structure; very friable; 3 to 10 percent of volume occurring as common or many thin lamellae of dark yellowish brown (10YR 4/6) fine sandy loam (Bt); moderate medium subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; strongly acid; clear smooth boundary.
- C—74 to 80 inches; 80 percent brown (10YR 4/3) and 20 percent yellowish brown (10YR 5/6), stratified fine sandy loam; massive; friable; moderately acid.

Range in Characteristics

Depth to the base of soil development: More than 40 inches

Ap or A horizon:

Hue—10YR

Value—3 or 4

Chroma—1 to 4

Texture—fine sandy loam

E, EB, or BE horizon (where present):

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—2 to 4

Texture—very fine sandy loam, fine sandy loam, sandy loam, or loamy fine sand

Bt horizon:

Hue-10YR or 7.5YR

Value-4 to 6

Chroma—3 to 6

Texture—very fine sandy loam, loam, fine sandy loam, or sandy loam

E and Bt horizon:

Hue—10YR or 7.5YR

Value-4 to 6

Chroma—2 to 6 in the E part; 3 to 6 in the Bt part

Texture—sandy loam, loamy sand, or sand or the fine or very fine analogs of these textures (E); sandy loam, loamy sand, or loam or the fine or very fine analogs of these textures (Bt)

Content of gravel—less than 5 percent

BC or C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—sandy loam, loamy sand, or sand or the fine or very fine analogs of these textures

Content of gravel—less than 5 percent

131B—Alvin fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Alvin and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more gravel in the lower part of the profile
- Soils that are moderately eroded
- Soils that have more clay and less sand in the upper part of the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 6 feet Dissimilar soils:
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Selma soils on toeslopes

Properties and Qualities of the Alvin Soil

Parent material: Eolian deposits and/or outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.5 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Very low Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

131C2—Alvin fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Alvin and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have more gravel in the lower part of the profile
- · Soils that are severely eroded
- Soils that have more clay and less sand in the upper part of the profile
- Soils that have a seasonal high water table at a depth of less than 6 feet *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Alvin Soil

Parent material: Eolian deposits and/or outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Andres Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Andres silt loam, 0 to 2 percent slopes; at an elevation of 633 feet; 1,525 feet south and 510 feet east of the northwest corner of sec. 27, T. 30 N., R. 8 E.; Livingston County, Illinois; USGS Campus topographic quadrangle; lat. 41 degrees 02 minutes 52 seconds N. and long. 88 degrees 18 minutes 17 seconds W.; UTM Zone 16, 390341E and 4544894N, NAD 83:

- Ap—0 to 11 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.
- BA—11 to 14 inches; brown (10YR 4/3) clay loam; moderate medium subangular blocky structure; friable; few very fine roots; many distinct black (10YR 2/1) organic coatings on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt1—14 to 19 inches; brown (10YR 4/3) clay loam; moderate fine subangular blocky structure; friable; few very fine roots; common fine distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine strong brown (7.5YR 5/6) weakly

cemented iron and manganese oxide concretions throughout; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

- Bt2—19 to 26 inches; grayish brown (10YR 5/2) clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt3—26 to 36 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine prismatic structure parting to moderate medium angular blocky; friable; few very fine roots; common faint dark gray (10YR 4/1) clay films on faces of peds; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- 2Bt4—36 to 50 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure; firm; few very fine roots; common faint grayish brown (2.5Y 5/2) clay films on faces of peds; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide concretions throughout; many medium prominent gray (N 5/) iron depletions in the matrix; 3 percent gravel; very slightly effervescent; slightly alkaline; clear smooth boundary.
- 2C—50 to 60 inches; light olive brown (2.5Y 5/4) silty clay loam; massive; firm; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide concretions throughout; many medium prominent gray (N 5/) iron depletions in the matrix; 5 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: Less than 24 inches

Depth to till: 22 to 50 inches

Depth to carbonates: 24 to 55 inches

Depth to the base of soil development: 36 to 60 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam, loam, or silty clay loam

Bt or BA horizon:

Hue-10YR or 2.5Y

Value—3 to 5

Chroma-2 to 4

Texture—clay loam, loam, or sandy clay loam

2Bt horizon:

Hue-10YR, 2.5Y, or 5Y

Value—3 to 6

Chroma-2 to 4

Texture—silty clay loam or silt loam

Content of gravel—less than 10 percent

2C horizon:

Hue—10YR, 2.5Y, or 5Y Value—4 to 6

Chroma—1 to 8

Texture—silty clay loam or silt loam Content of gravel—less than 10 percent

293A—Andres silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and lake plains Position on the landform: Footslopes and summits

Map Unit Composition

Andres and similar soils: 88 percent

Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:

- · Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have a thinner surface layer

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Andres Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

293B—Andres silt loam, 2 to 5 percent slopes

Setting

Landform: Lake plains and ground moraines

Position on the landform: Backslopes and footslopes

Map Unit Composition

Andres and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are moderately eroded

Dissimilar soils:

• The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Andres Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Appleriver Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Hapludalfs

Typical Pedon

Appleriver silt loam, 2 to 5 percent slopes; at an elevation of 976 feet; about 1,140 feet east and 2,460 feet north of the southwest corner of sec. 27, T. 29 N., R. 4 E.; Jo Daviess County, Illinois; USGS Elizabeth NE topographic quadrangle; lat. 42 degrees

28 minutes 49 seconds N. and long. 90 degrees 02 minutes 32 seconds W.; UTM Zone 15, 743115E and 4707342N, NAD 83:

- Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate very fine granular structure; friable; many fine roots; common pale brown (10YR 6/3) peds mixed in the lower part; neutral; abrupt smooth boundary.
- E—10 to 14 inches; pale brown (10YR 6/3) silt loam; moderate medium platy structure; friable; many fine roots; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- BE—14 to 19 inches; yellowish brown (10YR 5/4) silt loam; moderate medium platy structure parting to moderate fine subangular blocky; friable; many fine roots; common faint pale brown (10YR 6/3) silt coatings on faces of peds; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- Bt1—19 to 26 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to strong fine subangular blocky and angular blocky; friable; common fine roots; many faint brown (10YR 4/3) clay films and many faint pale brown (10YR 6/3) silt coatings on faces of peds; few distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Bt2—26 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- 2Bt3—34 to 44 inches; light olive brown (2.5Y 5/4) silty clay; weak coarse prismatic structure; firm; few very fine roots; few distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common medium and fine iron and manganese accumulations; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent rock fragments (dominantly chert); band of reddish brown (5YR 4/4) material at a depth of 38 to 40 inches; moderately acid; clear smooth boundary.
- 2Bt4—44 to 58 inches; light yellowish brown (2.5Y 6/4) silty clay; weak coarse prismatic structure; firm; few very fine roots; common distinct brownish yellow (10YR 6/6) clay films on faces of peds; common fine iron and manganese oxide accumulations throughout; few medium prominent greenish gray (5G 6/1) iron depletions in the matrix; slightly effervescent; slightly alkaline; abrupt smooth boundary.
- 2Cr—58 to 60 inches; variegated light brownish gray (2.5Y 6/2), yellowish brown (10YR 5/6), and greenish gray (5G 6/1) silty clay shale; massive; very firm; many fine lime concretions; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 30 to 50 inches Depth to bedrock: 40 to 60 inches

Depth to the base of soil development: 40 to 60 inches

Ap or A horizon:
Hue—10YR
Value—4
Chroma—2 or 3
Texture—silt loam

E horizon:

Hue-10YR

Value-4 to 6

Chroma—2 to 4

Texture—silt loam

BE horizon (where present):

Hue-10YR

Value-4 to 6

Chroma-2 to 4

Texture—silt loam or silty clay loam

Bt horizon:

Hue-10YR or 2.5Y

Value—4 or 5

Chroma-2 to 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay, silty clay loam, or clay

Content of gravel—1 to 15 percent

2Cr horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay, silty clay loam, or clay

732A—Appleriver silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and stream terraces Position on the landform: Footslopes and summits

Map Unit Composition

Appleriver and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to bedrock
- Soils that are more than 60 inches deep to bedrock
- Soils that have less than 30 inches of loess over the residuum
- Soils that have more clay and less silt in the lower part of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have a thicker and darker surface layer

Dissimilar soils:

The well drained Marseilles soils on summits and backslopes

Properties and Qualities of the Appleriver Soil

Parent material: Loess over residuum derived from shale

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic) Available water capacity: About 8.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

732B—Appleriver silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and ground moraines Position on the landform: Backslopes and summits

Map Unit Composition

Appleriver and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to bedrock
- Soils that are more than 60 inches deep to bedrock
- Soils that have less than 30 inches of loess over the residuum
- Soils that have more clay and less silt in the lower part of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have a thicker and darker surface layer

Dissimilar soils:

The well drained Marseilles soils on summits and backslopes

Properties and Qualities of the Appleriver Soil

Parent material: Loess over residuum derived from shale

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic) Available water capacity: About 10.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Arrowsmith Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Arrowsmith silt loam, 0 to 2 percent slopes; at an elevation of 770 feet; 650 feet south and 1,350 feet east of the northwest corner of sec. 18, T. 22 N., R. 5 E.; McLean County, Illinois; USGS Farmer City North topographic quadrangle; lat. 40 degrees 22 minutes 02.9 seconds N. and long. 88 degrees 40 minutes 59.8 seconds W.; UTM Zone 16, 357085E and 4469697N, NAD 27:

- Ap—0 to 8 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; very friable; neutral; abrupt smooth boundary.
- A—8 to 12 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; friable; neutral; abrupt smooth boundary.
- Bt1—12 to 17 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; friable; common faint very dark grayish brown (10YR 3/2) organoclay films on faces of peds; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.
- Bt2—17 to 23 inches; olive brown (2.5Y 4/4) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.
- Bt3—23 to 30 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; many fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; slightly alkaline; abrupt smooth boundary.
- BCk—30 to 39 inches; light olive brown (2.5Y 5/4) silt loam; weak coarse subangular blocky structure; friable; very few distinct dark grayish brown (2.5Y 4/2) clay films lining pores; many fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; many fine and medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly

cemented iron and manganese oxide concretions in the matrix; few medium rounded white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

Ck—39 to 60 inches; light olive brown (2.5Y 5/4) silt loam; massive; friable; many fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese concretions in the matrix; few medium rounded white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess: More than 60 inches

Depth to carbonates: 25 to 40 inches

Depth to the base of soil development: 25 to 40 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—2 to 4

Texture—silty clay loam or silt loam

BCk or BCkg horizon (where present):

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silt loam

Ck or Ckg horizon:

Hue-2.5Y or 10YR

Value—4 to 6

Chroma-2 to 4

Texture—silt loam

715A—Arrowsmith silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits and footslopes

Map Unit Composition

Arrowsmith and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner surface layer
- Soils that have carbonates at a depth of more than 40 inches

• Soils that have a seasonal high water table at a depth of more than 2 feet

• Soils that have loamy drift in the lower part of the profile Dissimilar soils:

The well drained Elkhart soils on summits and backslopes

The poorly drained Sable and Spaulding soils on toeslopes

Properties and Qualities of the Arrowsmith Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Ashkum Series

Taxonomic classification: Fine, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Ashkum silty clay loam, 0 to 2 percent slopes; at an elevation of 705 feet; 96 feet south and 2,030 feet east of the northwest corner of sec. 22, T. 34 N., R. 11 E.; Will County, Illinois; USGS Manhattan topographic quadrangle; lat. 41 degrees 25 minutes 30 seconds N. and long. 87 degrees 57 minutes 19 seconds W., NAD 27; UTM Zone 16, 420168E and 4586370N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; many very fine roots; neutral; clear smooth boundary.
- A—7 to 12 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- BAg—12 to 18 inches; dark gray (2.5Y 4/1) silty clay loam; moderate very fine and fine subangular blocky structure; firm; common very fine roots; many distinct black (10YR 2/1) organic coatings on faces of peds; common fine very dark gray (7.5YR 3/1) very weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.
- Bg1—18 to 29 inches; grayish brown (2.5Y 5/2) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common very fine

roots; few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine very dark gray (7.5YR 3/1) very weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint gray (2.5Y 5/1) iron depletions in the matrix; neutral; clear wavy boundary.

- 2Bg2—29 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine very dark gray (10YR 3/1) very weakly cemented iron and manganese oxide concretions throughout; common fine and medium prominent yellowish brown (10YR 5/8) and faint brown (10YR 5/3) masses of iron accumulation in the matrix; common fine and medium faint gray (5Y 5/1) iron depletions in the matrix; 8 percent gravel; neutral; gradual wavy boundary.
- 2BCg—49 to 54 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to weak coarse angular blocky; firm; few very fine roots; common fine very dark gray (10YR 3/1) very weakly cemented iron and manganese oxide concretions throughout; common fine and medium prominent yellowish brown (10YR 5/6) and faint brown (10YR 5/3) masses of iron accumulation in the matrix; common fine and medium faint gray (2.5Y 5/1) iron depletions in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.
- 2Cg—54 to 60 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; firm; common fine prominent yellowish brown (10YR 5/6) and common fine and medium faint brown (10YR 5/3) masses of iron accumulation in the matrix; common fine faint gray (2.5Y 5/1) iron depletions in the matrix; 8 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches Thickness of the colluvium: 15 to 40 inches Depth to carbonates: 24 to 60 inches

Depth to the base of soil development: 30 to 60 inches

Ap or A horizon:

Hue—10YR, 2.5Y, or N Value—2 or 3 Chroma—0 or 1 Texture—silty clay loam

Bg or BA horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—3 to 6 Chroma—0 to 2

Texture—silty clay loam or silty clay

2Bg or 2BCg horizon:

Hue—2.5Y, 5Y, 5GY, or N

Value—4 to 6 Chroma—0 to 2

Texture—silty clay loam

2Cg horizon:

Hue-2.5Y, 5Y, 5GY, or N

Value—5 or 6

Chroma—0 to 2

Texture—silty clay loam
Content of gravel—less than 10 percent

232A—Ashkum silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Toeslopes

Map Unit Composition

Ashkum and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

Soils that have a thicker surface layer

- Soils that have more clay and less silt in the profile
- Soils that have 6 to 12 inches of silty overwash

Dissimilar soils:

- The somewhat poorly drained Elliott soils on summits and footslopes
- The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Ashkum Soil

Parent material: Colluvium and the underlying till

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Atterberry Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon

Atterberry silt loam, 0 to 2 percent slopes; at an elevation of 660 feet; 1,650 feet north and 1,120 feet east of the southwest corner of sec. 34, T. 16 N., R. 9 E.; Bureau

County, Illinois; USGS Princeton South topographic quadrangle; lat. 41 degrees 19 minutes 30 seconds N. and long. 89 degrees 33 minutes 15 seconds W.; UTM Zone 16, 286240E and 4577983N, NAD 83:

- Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; few fine roots; moderately acid; abrupt smooth boundary.
- E—9 to 13 inches; light brownish gray (10YR 6/2) silt loam, light gray (10YR 7/2) dry; moderate thin platy structure; friable; few fine roots; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.
- BE—13 to 17 inches; brown (10YR 5/3) silt loam; moderate medium platy structure parting to moderate very fine subangular blocky; friable; few fine roots; common faint brown (10YR 4/3) clay films and common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.
- Bt—17 to 24 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; many faint dark grayish brown (10YR 4/2) clay films and common faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Btg1—24 to 33 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; common fine faint light brownish gray (2.5Y 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Btg2—33 to 40 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; common fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Btg3—40 to 48 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- BCg—48 to 55 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; friable; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Cg—55 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid.

Range in Characteristics

Ap or A horizon:

Value—2 or 3 Chroma—1 or 2 Texture—silt loam

E horizon:

Value—4 to 6 Chroma—1 or 2 Texture—silt loam

Bt or Btg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6 Chroma—1 to 4

Texture—silty clay loam or silt loam

C or Cg horizon:

Hue—10YR, 2.5Y, or 5Y Value—4 to 6 Chroma—1 to 4 Texture—silt loam

61A—Atterberry silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits

Map Unit Composition

Atterberry and similar soils: 98 percent

Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a lighter colored surface layer
- · Soils that have a thicker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent

Dissimilar soils:

- The well drained Greenbush soils on summits and shoulders
- The poorly drained Sable soils on summits and toeslopes

Properties and Qualities of the Atterberry Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.5 to 3.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

61B—Atterberry silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits

Map Unit Composition

Atterberry and similar soils: 98 percent

Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker surface layer
- Soils that have a lighter colored surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are moderately eroded

Dissimilar soils:

- The well drained Greenbush soils on summits and shoulders
- The poorly drained Sable soils on summits and toeslopes

Properties and Qualities of the Atterberry Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.5 to 3.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland Hydric soil status: Not hydric

Barony Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs

Typical Pedon

Barony silt loam, 2 to 5 percent slopes; at an elevation of 875 feet; 687 feet north and 1,337 feet east of the southwest corner of sec. 33, T. 41 N., R. 6 E.; Kane County, Illinois; USGS Maple Park topographic quadrangle; lat. 41 degrees 59 minutes 01 second N. and long. 88 degrees 33 minutes 41 seconds W., NAD 27; UTM Zone 16, 370648E and 4649139N, NAD 83:

- Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure parting to weak fine granular; friable; common very fine roots; neutral; abrupt smooth boundary.
- Bt1—8 to 12 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; neutral; clear smooth boundary.
- Bt2—12 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; slightly acid; clear wavy boundary.
- Bt3—16 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few fine black (7.5YR 2.5/1) manganese concretions throughout; moderately acid; clear wavy boundary.
- Bt4—21 to 26 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; common fine black (7.5YR 2.5/1) manganese concretions throughout; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.
- Bt5—26 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine strong brown (7.5YR 5/8) iron oxide concretions throughout; common fine black (7.5YR 2.5/1) manganese concretions throughout; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; slightly acid; clear wavy boundary.
- 2Bt6—34 to 41 inches; brown (7.5YR 4/4) sandy clay loam; moderate medium and coarse subangular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; few distinct brown (7.5YR 4/3) clay films on faces of peds and in pores; common fine strong brown (7.5YR 5/8) iron oxide concretions throughout; common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; many medium prominent light brownish gray

- (10YR 6/2) iron depletions in the matrix; 5 percent gravel; neutral; clear smooth boundary.
- 2Bt7—41 to 45 inches; yellowish brown (10YR 5/4) and brown (7.5YR 4/4) silt loam and loam; weak medium and coarse subangular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; few distinct brown (7.5YR 4/3) clay films on faces of peds and in pores; common fine strong brown (7.5YR 5/8) iron oxide concretions throughout; common fine distinct brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; many fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 2 percent gravel; neutral; clear wavy boundary.
- 2Bt8—45 to 54 inches; brown (7.5YR 4/4) sandy clay loam; weak medium and coarse subangular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organoclay films on faces of peds; few distinct brown (7.5YR 4/3) clay films on faces of peds; common fine very pale brown (10YR 8/2) calcium carbonate concretions throughout; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 14 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2C1—54 to 65 inches; yellowish brown (10YR 5/4) and strong brown (7.5YR 4/6), stratified sand and loamy sand; single grain; loose; common fine faint strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; strongly effervescent; slightly alkaline; clear wavy boundary.
- 2C2—65 to 78 inches; brown (7.5YR 4/4 and 5/4) and yellowish brown (10YR 5/4), stratified very fine sandy loam, loamy sand, and sandy loam; massive; very friable; common medium faint strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; 8 percent gravel; strongly effervescent; slightly alkaline; clear wavy boundary.
- 2C3—78 to 85 inches; yellowish brown (10YR 5/6 and 5/8) and brown (7.5YR 5/4), stratified loamy sand, sandy loam, and very fine sandy loam; massive; very friable; common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of loess or silty material: 20 to 40 inches Depth to carbonates: More than 40 inches Depth to the base of soil development: 30 to more than 60 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—2 to 6

Texture—silt loam, loam, silty clay loam, clay loam, sandy clay loam, or sandy loam

Content of gravel—less than 15 percent

2C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—3 to 6 Chroma—3 to 6

Texture—stratified silt loam, loam, or sandy loam with strata of loamy sand or sand

Content of gravel—less than 15 percent

662B—Barony silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Barony and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker surface layer
- Soils that are more than 40 inches deep to outwash
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Barony Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Batavia Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Batavia silt loam, 2 to 5 percent slopes; at an elevation of 770 feet; 57 feet south and 1,482 feet east of the northwest corner of sec. 8, T. 26 N., R. 8 E.; Stephenson County, Illinois; USGS Freeport East topographic quadrangle; lat. 42 degrees 16 minutes 20 seconds N. and long. 89 degrees 36 minutes 25 seconds W.; UTM Zone 16, 285014E and 4683292N, NAD 83:

- Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam; weak medium and coarse granular structure; friable; many roots; neutral; abrupt smooth boundary.
- E—9 to 12 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; firm; common roots; common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic stains on wormcasts and surfaces along root channels; neutral; clear smooth boundary.
- BE—12 to 17 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common roots; few distinct very dark grayish brown (10YR 3/2) organic stains on surfaces along root channels; common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
- Bt1—17 to 25 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate and strong fine subangular blocky structure; firm; common roots; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few distinct very dark grayish brown (10YR 3/2) and few faint dark yellowish brown (10YR 3/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—25 to 30 inches; brown (10YR 5/3) silty clay loam; moderate and strong fine and medium subangular blocky structure; firm; common roots; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt3—30 to 45 inches; brown (10YR 5/3) silty clay loam; moderate medium angular and subangular blocky structure; firm; few roots; many faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; few fine faint very dark brown (10YR 2/2) iron and manganese oxide accumulations in the matrix; few fine faint brown (7.5YR 4/4) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- 2Bt4—45 to 50 inches; brown (10YR 5/3) and dark yellowish brown (10YR 4/4) clay loam; weak medium and coarse angular blocky structure; firm; few roots; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; few medium faint very dark brown (10YR 2/2) iron and manganese oxide accumulations in the matrix; few fine faint brown (7.5YR 4/4) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- 2C—50 to 60 inches; stratified yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 3/4) clay loam, and brown (10YR 5/3) and pale brown (10YR 6/3) silt loam; massive; friable; common fine faint brown (7.5YR 4/4) and common fine

distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; slightly acid.

Range in Characteristics

Depth to the base of soil development: 42 to 70 inches

A or Ap horizon:

Hue-10YR

Value-2 or 3

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue-10YR

Value-4 to 6

Chroma—2 or 3

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue-10YR

Value-3 to 6

Chroma—3 to 6

Texture—stratified sandy loam, loam, sandy clay loam, silt loam, or clay loam

Content of gravel—less than 10 percent

2C horizon:

Hue-10YR

Value—3 to 6

Chroma—3 to 6

Texture—stratified sandy loam, loam, sandy clay loam, silt loam, or clay loam

Content of gravel—less than 10 percent

105A—Batavia silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains

Position on the landform: Summits

Map Unit Composition

Batavia and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker surface layer
- Soils that have less sand and more silt in the lower part of the profile
- Soils that are underlain by gravel
- · Soils that have outwash within a depth of 40 inches
- · Soils that have slopes of more than 2 percent

Dissimilar soils:

- The somewhat poorly drained Virgil soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Batavia Soil

Parent material: Loess over stratified outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

105B—Batavia silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and backslopes

Map Unit Composition

Batavia and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are underlain by gravel
- Soils that have less sand and more silt in the lower part of the profile
- Soils that have outwash within a depth of 40 inches
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The somewhat poorly drained Virgil soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Batavia Soil

Parent material: Loess over stratified outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.4 inches to a depth of 60 inches

Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

105C2—Batavia silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Shoulders and backslopes

Map Unit Composition

Batavia and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are severely eroded
- Soils that have less sand and more silt in the lower part of the profile
- Soils that have outwash within a depth of 40 inches
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are underlain by till

Dissimilar soils:

- The somewhat poorly drained Virgil soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Batavia Soil

Parent material: Loess over stratified outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Beecher Series

Taxonomic classification: Fine, illitic, mesic Udollic Epiaqualfs

Typical Pedon

Beecher silt loam, 0 to 2 percent slopes; at an elevation of 655 feet; 340 feet south and 65 feet west of the northeast corner of sec. 14, T. 31 N., R. 12 E.; Kankakee County, Illinois; USGS Bradley topographic quadrangle; lat. 41 degrees 10 minutes 36 seconds N. and long. 87 degrees 47 minutes 56 seconds W., NAD 27; UTM Zone 16, 432988E and 4558680N, NAD 83:

- Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; weak very fine granular structure; friable; neutral; abrupt smooth boundary.
- BE—9 to 13 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate very fine granular structure; friable; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- 2Bt1—13 to 16 inches; brown (10YR 5/3) silty clay loam; moderate very fine subangular blocky structure; firm; few distinct very dark gray (10YR 3/1) organoclay films on faces of peds; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; moderately acid; clear smooth boundary.
- 2Bt2—16 to 21 inches; grayish brown (10YR 5/2) silty clay loam; moderate very fine and fine subangular blocky structure; firm; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common distinct dark gray (10YR 4/1) clay films on faces of peds; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; moderately acid; clear smooth boundary.
- 2Bt3—21 to 27 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common distinct dark gray (10YR 4/1) clay films on faces of peds; few fine dark brown (7.5YR 3/3) and black (10YR 2/1) iron and manganese oxide concretions throughout; few fine prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; 2 percent gravel; slightly alkaline; clear smooth boundary.
- 2Bt4—27 to 32 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common distinct grayish brown (10YR 5/2) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/8) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many medium prominent gray (5Y 5/1) iron depletions in the matrix; 2 percent gravel; slightly alkaline; clear smooth boundary.
- 2BCt—32 to 37 inches; yellowish brown (10YR 5/6) silty clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; many coarse

prominent gray (5Y 5/1) iron depletions in the matrix; 2 percent gravel; slightly effervescent; moderately alkaline; clear smooth boundary.

2Cd—37 to 60 inches; yellowish brown (10YR 5/4) silty clay loam; massive; very firm; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/8) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine prominent greenish gray (5GY 5/1) iron depletions in the matrix; common medium prominent greenish gray (5G 6/1) iron depletions on cleavage planes; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 18 inches

Depth to carbonates: 20 to 42 inches

Depth to the base of soil development: 24 to 45 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam

E horizon (where present):

Hue-10YR or 2.5Y

Value—4 or 5

Chroma—1 or 2

Texture—silt loam

BE, Bt, or 2Bt horizon:

Hue-10YR or 2.5Y

Value-4 to 6

Chroma-2 to 4

Texture—silty clay loam or silty clay

Content of gravel—less than 5 percent

2BCt and 2Cd horizons:

Hue-10YR or 2.5Y

Value-4 to 6

Chroma-2 to 6

Texture—silty clay loam

Content of gravel—1 to 10 percent

298B—Beecher silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes and footslopes

Map Unit Composition

Beecher and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- · Soils that have a lighter colored surface layer

- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have a thicker surface layer

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Beecher Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 24 to 45 inches to dense material Available water capacity: About 7.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Birkbeck Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Birkbeck silt loam, 2 to 5 percent slopes; at an elevation of 680 feet; 750 feet south and 1,600 feet east of the northwest corner of sec. 25, T. 17 N., R. 3 E.; Macon County, Illinois; USGS Argenta topographic quadrangle; lat. 39 degrees 54 minutes 25.3 seconds N. and long. 88 degrees 48 minutes 59.7 seconds W.; UTM Zone 16, 344720E and 4418800N, NAD 27:

- A—0 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak thin platy structure parting to moderate very fine granular; friable; slightly acid; abrupt smooth boundary.
- E—4 to 9 inches; brown (10YR 4/3) silt loam; moderate very thin platy structure; friable; few distinct dark brown (10YR 3/3) organic coatings and gray (10YR 6/1) (dry) clay depletions on faces of peds; very strongly acid; clear smooth boundary.
- Bt1—9 to 13 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine subangular blocky structure parting to moderate very fine granular; friable; common distinct dark brown (10YR 3/3) organo-clay films and light gray (10YR 7/1) (dry) clay depletions on faces of peds; few fine weakly cemented ironmanganese nodules throughout; strongly acid; clear smooth boundary.
- Bt2—13 to 24 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and very fine subangular blocky structure; friable; many distinct brown (7.5YR 4/4)

clay films on faces of peds; few fine weakly cemented iron-manganese nodules throughout; strongly acid; clear smooth boundary.

- Bt3—24 to 29 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; many distinct brown (7.5YR 4/4) clay films on faces of peds; common fine weakly cemented iron-manganese nodules throughout; strongly acid; clear smooth boundary.
- Bt4—29 to 42 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; many distinct brown (7.5YR 4/4) clay films on faces of peds; common medium weakly cemented iron-manganese nodules throughout; few fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; common fine distinct light yellowish brown (2.5Y 6/4) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- Bt5—42 to 54 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium and coarse subangular blocky structure; friable; many distinct brown (7.5YR 4/4) clay films on faces of peds; common medium weakly cemented iron-manganese nodules throughout; few fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; common fine distinct light yellowish brown (2.5Y 6/4) masses of iron and manganese accumulation and few medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- 2Bt6—54 to 60 inches; dark yellowish brown (10YR 4/4) loam; weak coarse subangular blocky structure; friable; few distinct brown (7.5YR 4/4) clay films on face of peds; few distinct very dark grayish brown (10YR 3/2) organo-clay films in pores; few fine weakly cemented iron-manganese nodules throughout; common fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; common medium distinct light yellowish brown (2.5Y 6/4) masses of iron and manganese accumulation and fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.
- 2C—60 to 68 inches; light olive brown (2.5Y 5/4) loam; massive; firm; few distinct very dark grayish brown (10YR 3/2) organo-clay films in pores; few fine weakly cemented iron-manganese nodules throughout; common fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; common fine faint light yellowish brown (2.5Y 6/4) and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the loess: 40 to 60 inches Depth to carbonates: 40 to 70 inches

Depth to the base of soil development: 40 to 70 inches

Ap or A horizon:

Hue—10YR Value—2 to 5

Chroma—1 to 3

Texture—silt loam; less commonly silty clay loam

E horizon (where present):

Hue—10YR Value—4 or 5 Chroma—2 to 4

Texture—silt loam

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Bt horizon:

Hue—10YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma-2 to 8

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—less than 15 percent

2C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma-2 to 4

Texture—loam, clay loam, or silt loam Content of gravel—less than 15 percent

233A—Birkbeck silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Summits

Map Unit Composition

Birkbeck and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker and darker surface layer
- Soils that have a seasonal high water table at a depth of less than 2 feet or more than 3.5 feet
- Soils that have a thinner surface layer
- Soils that have till within a depth of 40 inches
- · Soils that have slopes of more than 2 percent

Dissimilar soils:

The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess and the underlying till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.5 to 4.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

233B—Birkbeck silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Birkbeck and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

• Soils that have a thicker and darker surface layer

- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that are moderately eroded
- Soils that have till within a depth of 40 inches
- Soils that have slopes of less than 2 percent or more than 5 percent

Dissimilar soils:

• The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess and the underlying till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

233C2—Birkbeck silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Birkbeck and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have till within a depth of 40 inches
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are severely eroded or only slightly eroded

Dissimilar soils:

- The nearly level, somewhat poorly drained Sabina and Sunbury soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess and the underlying till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Blackberry Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon

Blackberry silt loam, 2 to 5 percent slopes; at an elevation of about 748 feet; 25 feet north and 450 feet west of the southeast corner of sec. 19, T. 21 N., R. 7 E.; Champaign County, Illinois; USGS Foosland topographic quadrangle; lat. 40 degrees 15 minutes 10 seconds N. and long. 88 degrees 26 minutes 36 seconds W., NAD 27; UTM Zone 16, 377259E and 4456799N, NAD 83:

- Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; neutral; abrupt smooth boundary.
- A—10 to 16 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.
- BA—16 to 20 inches; brown (10YR 4/3) silty clay loam; weak very fine subangular blocky structure; friable; many faint dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- Bt1—20 to 24 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—24 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; many distinct brown (10YR 4/3) clay films on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide nodules throughout; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.
- Bt3—34 to 47 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse prismatic structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide nodules throughout; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; few fine distinct yellowish brown (10YR 5/6) masses of iron in the matrix; moderately acid; clear smooth boundary.
- 2Bt4—47 to 62 inches; yellowish brown (10YR 5/4), stratified silt loam and loam; weak coarse subangular blocky structure; friable; very few faint brown (10YR 4/3) and grayish brown (10YR 5/2) clay films lining pores and on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide nodules throughout; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; common medium distinct yellowish brown (10YR 5/6) masses of iron in the matrix; slightly acid; gradual smooth boundary.
- 2C—62 to 70 inches; light olive brown (2.5Y 5/4), stratified silt loam, loam, and sandy loam; massive; friable; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide nodules throughout; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; common medium distinct yellowish brown (10YR 5/6) masses of iron in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess: 40 to 60 inches Depth to carbonates: More than 40 inches

Depth to the base of soil development: 45 to 70 inches

Ap or A horizon:

Hue—10YR

Value-2 or 3

Chroma—1 to 3

Texture—silt loam

BA or AB horizon (where present):

Hue-10YR

Value-3 or 4

Chroma-2 to 4

Texture—silt loam or silty clay loam

Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—2 to 4

Texture—silty clay loam or silt loam

2Bt or 2BC horizon:

Hue-7.5YR or 10YR

Value—4 to 6

Chroma-2 to 6

Texture—clay loam, loam, silt loam, sandy loam, or sandy clay loam or the gravelly analogs of these textures

Content of gravel—less than 20 percent

2C horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma—2 to 6

Texture—loam, clay loam, loamy sand, sandy loam, or silt loam or the gravelly analogs of these textures

Content of gravel—less than 25 percent

679B—Blackberry silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Blackberry and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have outwash at a depth of less than 40 inches or more than 60 inches
- · Soils that are moderately eroded
- Soils that have till in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Blackberry Soil

Parent material: Loess over outwash Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Blount Series

Taxonomic classification: Fine, illitic, mesic Aeric Epiaqualfs

Typical Pedon

Blount silt loam, 2 to 4 percent slopes; at an elevation of 725 feet; 1,850 feet west and 135 feet south of the northeast corner of sec. 5, T. 25 N., R. 6 E.; Livingston County, Illinois; USGS Fairbury topographic quadrangle; lat. 40 degrees 40 minutes 16 seconds N. and long. 88 degrees 32 minutes 38 seconds W.; UTM Zone 16, 369521E and 4503388N, NAD 83:

- Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; few very fine roots; slightly acid; abrupt smooth boundary.
- E—6 to 10 inches; grayish brown (10YR 5/2) silt loam; moderate fine subangular blocky structure; friable; few very fine roots; few faint dark grayish brown (10YR 4/2) organic coatings on faces of peds; few fine iron-manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bt1—10 to 17 inches; brown (10YR 5/3) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; few faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine iron-manganese oxide masses throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.
- Bt2—17 to 23 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; common faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine iron-manganese oxide masses throughout; common fine faint gray (2.5Y 6/1) iron depletions in the matrix; 2 percent gravel; neutral; clear smooth boundary.

- Bt3—23 to 28 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots; few faint dark grayish brown (2.5Y 4/2) organo-clay coatings on faces of peds; few fine iron-manganese oxide masses throughout; few fine faint light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; many fine faint gray (2.5Y 6/1) iron depletions in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- BC—28 to 34 inches; light olive brown (2.5Y 5/4) silty clay loam; weak fine prismatic structure parting to weak fine subangular blocky; firm; few fine iron-manganese oxide masses throughout; many medium distinct gray (2.5Y 6/1) iron depletions in the matrix; 3 percent gravel; strongly effervescent; slightly alkaline; clear smooth boundary.
- Cd—34 to 60 inches; light olive brown (2.5Y 5/4) silty clay loam; massive; very firm; few fine iron-manganese oxide masses throughout; many coarse distinct gray (2.5Y 6/1) iron depletions in the matrix; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 18 inches

Depth to carbonates: 19 to 40 inches

Depth to the base of soil development: 30 to 60 inches

Ap or A horizon:

Hue-10YR

Value—3 or 4

Chroma—1 to 3

Texture—silt loam, loam, or silty clay loam

E horizon (where present):

Hue—10YR or 2.5Y

Value—4 or 5

Chroma-1 to 3

Texture—silt loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma-1 to 4

Texture—silty clay loam, clay loam, clay, or silty clay

Content of gravel—2 to 10 percent

BCg or BC horizon (where present):

Hue-10YR to 5Y

Value-4 to 6

Chroma—1 to 6

Texture—silty clay loam, clay loam, or silty clay

Content of gravel—2 to 14 percent

Cd or Cdg horizon:

Hue-10YR to 5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay loam or clay loam

Content of gravel—2 to 14 percent

23B—Blount silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Footslopes and backslopes

Map Unit Composition

Blount and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

· Soils that are more than 18 inches deep to till

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that are moderately eroded

Dissimilar soils:

• The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Blount Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 30 to 48 inches to dense material Available water capacity to a depth of 60 inches: About 8.1 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Boone Series

Taxonomic classification: Mesic, uncoated Typic Quartzipsamments

Typical Pedon

Boone loamy fine sand, 15 to 35 percent slopes; at an elevation of 738 feet; 2,000 feet north and 2,600 feet west of the southeast corner of sec. 21, T. 22 N., R. 10 E.; Lee County, Illinois; USGS Daysville topographic quadrangle; lat. 41 degrees 52 minutes 46 seconds N. and long. 89 degrees 21 minutes 06 seconds W.; UTM Zone 16, 304856E and 4639057N, NAD 83:

- A—0 to 4 inches; very dark gray (10YR 3/1) loamy fine sand, gray (10YR 5/1) dry; weak medium granular structure; very friable; strongly acid; gradual smooth boundary.
- E—4 to 6 inches; dark gray (10YR 4/1) loamy fine sand; weak medium platy structure; very friable; strongly acid; gradual smooth boundary.
- Bw—6 to 15 inches; yellowish brown (10YR 5/4) loamy fine sand; weak medium subangular blocky structure; very friable; strongly acid; abrupt wavy boundary.
- C—15 to 23 inches; yellowish brown (10YR 5/6) fine sand; single grain; loose; strongly acid; abrupt irregular boundary.
- Cr-23 to 60 inches; yellowish brown (10YR 5/6) sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

A horizon:

Hue—10YR or 7.5YR

Value—2 to 5

Chroma—1 to 3

Texture—sand, fine sand, loamy sand, or loamy fine sand or the channery analogs of these textures

Content of channers—less than 35 percent

Content of flagstones—less than 5 percent

E horizon:

Hue-10YR or 7.5YR

Value—4 or 5

Chroma—1 to 3

Texture—sand, fine sand, loamy sand, or loamy fine sand or the channery analogs of these textures

Content of channers—less than 35 percent

Content of flagstones—less than 5 percent

Bw horizon:

Hue-10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—sand, fine sand, loamy sand, or loamy fine sand or the channery analogs of these textures

Content of channers—less than 35 percent

Content of flagstones—less than 5 percent

C horizon:

Hue-10YR or 7.5YR

Value-5 to 8

Chroma—1 to 6

Texture—sand, fine sand, channery sand, or channery fine sand

Content of channers—less than 35 percent

Content of flagstones—less than 5 percent

Cr horizon:

Hue—10YR or 7.5YR

Value—5 to 8

Chroma-1 to 6

397F—Boone loamy fine sand, 15 to 35 percent slopes Setting

Landform: Hillslopes

Position on the landform: Backslopes

Map Unit Composition

Boone and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more clay throughout the profile
- Soils that do not have bedrock within a depth of 40 inches
- Soils that are moderately eroded
- Soils that have slopes of less than 15 percent
- Soils in areas where more than 15 percent of the surface is covered by rock fragments

Dissimilar soils:

Severely eroded soils on shoulders and backslopes

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy residuum derived from sandstone

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 1.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.0 to 1.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Low

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 7s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Bowes Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Bowes silt loam, 0 to 2 percent slopes; at an elevation of 920 feet; 330 feet north and 330 feet west of the center of sec. 19, T. 42 N., R. 8 E.; Kane County, Illinois; USGS Elgin topographic quadrangle; lat. 42 degrees 06 minutes 15 seconds N. and long. 88 degrees 20 minutes 45 seconds W., NAD 27; UTM Zone 16, 388707E and 4662231N, NAD 83:

- Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak very fine and fine granular structure; friable; moderately acid; abrupt smooth boundary.
- E—9 to 13 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/4) dry; weak thick platy structure parting to weak fine granular; friable; slightly acid; clear smooth boundary.
- Bt1—13 to 19 inches; brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; firm; common distinct dark brown (10YR 3/3) clay films on faces of peds; slightly acid; clear smooth boundary.
- Bt2—19 to 28 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure parting to moderate fine subangular blocky; firm; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; gradual smooth boundary.
- Bt3—28 to 36 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; gradual smooth boundary.
- Bt4—36 to 43 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common distinct brown (10YR 4/3) clay films on faces of peds; 2 percent gravel; moderately acid; clear smooth boundary.
- 2Bt5—43 to 46 inches; brown (10YR 4/3) gravelly clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few distinct dark yellowish brown (10YR 3/4) clay films on faces of peds; 22 percent gravel; 5 percent dolomitic cobbles; slightly alkaline; clear smooth boundary.
- 2Bt6—46 to 51 inches; dark brown (7.5YR 3/2) very gravelly sandy loam; weak medium subangular blocky structure; friable; common distinct very dark brown (7.5YR 2/2) organo-clay films on pebbles and occurring as bridges between sand grains; 40 percent gravel; 10 percent dolomitic cobbles; slightly alkaline; clear smooth boundary.
- 2C—51 to 61 inches; brown (7.5YR 4/4) very gravelly sand; single grain; loose; 45 percent gravel; 10 percent dolomitic cobbles; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 28 to 60 inches Depth to sandy and gravelly outwash: 40 to 60 inches Depth to carbonates: 40 to 60 inches Depth to the base of soil development: 40 to 65 inches

Ap or A horizon:

Hue—7.5YR or 10YR Value—2 or 3 Chroma—1 to 3 Texture—silt loam

E horizon (where present):

Hue—7.5YR or 10YR Value—4 to 6 Chroma—3 or 4 Texture—silt loam

Bt horizon:

Hue—7.5YR or 10YR Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam Content of gravel—less than 5 percent

2Bt horizon:

Hue—7.5YR or 10YR

Value—3 to 5

Chroma-2 to 6

Texture—the gravelly or very gravelly analogs of loam, sandy loam, sandy clay

loam, clay loam, or loamy sand Content of gravel—15 to 60 percent Content of cobbles—less than 15 percent

2C horizon:

Hue—7.5YR or 10YR

Value—4 to 7 Chroma—3 to 6

Texture—stratified extremely gravelly coarse sand to gravelly sandy loam

Content of gravel—15 to 75 percent Content of cobbles—5 to 35 percent

792A—Bowes silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Bowes and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have sandy and gravelly deposits at a depth of less than 40 inches or more than 60 inches
- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have less gravel in the lower part of the profile
- Soils that have slopes of more than 2 percent
- · Soils that have a thicker surface layer

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Bowes Soil

Parent material: Loess or other silty material and the underlying loamy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

792B—Bowes silt loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Bowes and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have sandy and gravelly deposits at a depth of less than 40 inches or more than 60 inches
- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have less gravel in the lower part of the profile
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have a thicker surface layer

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Bowes Soil

Parent material: Loess or other silty material and the underlying loamy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Brenton Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Brenton silt loam, 0 to 2 percent slopes; at an elevation of 612 feet; 60 feet west and 1,760 feet south of the northeast corner of sec. 29, T. 30 N., R. 4 E.; Livingston County, Illinois; USGS Streator South topographic quadrangle; lat. 41 degrees 02 minutes 33 seconds N. and long. 88 degrees 46 minutes 36 seconds W., NAD 27; UTM Zone 16, 350669E and 4545007N, NAD 83:

- Ap—0 to 12 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.
- Bt1—12 to 18 inches; dark grayish brown (10YR 4/2) silty clay loam; weak fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt2—18 to 24 inches; brown (10YR 5/3) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt3—24 to 28 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- 2Bt4—28 to 34 inches; grayish brown (10YR 5/2) clay loam; weak fine prismatic structure parting to weak fine angular blocky; friable; few very fine roots; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide concentrations throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint gray (10YR 5/1) iron depletions; neutral; clear smooth boundary.
- 2Bt5—34 to 44 inches; grayish brown (10YR 5/2) sandy loam; weak fine prismatic structure; friable; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- 2C—44 to 60 inches; grayish brown (10YR 5/2), stratified sandy loam and loamy sand; massive; very friable; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 24 to 40 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to more than 60 inches

Ap or A horizon:

Hue—10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam

Bt horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 7

Chroma—1 to 8

Texture—stratified clay loam, loam, sandy loam, sandy clay loam, or silt loam

Content of gravel—less than 5 percent

2C horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 7

Chroma—1 to 8

Texture—stratified loam, sandy loam, sandy clay loam, or loamy sand

Content of gravel—less than 15 percent

149A—Brenton silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Footslopes and summits

Map Unit Composition

Brenton and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of more than 2 percent
- · Soils that are underlain by till
- Soils that are more than 40 inches deep to outwash
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The well drained Proctor soils on summits
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Brenton Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Bryce Series

Taxonomic classification: Fine, mixed, superactive, mesic Vertic Endoaquolls

Typical Pedon

Bryce silty clay, 0 to 2 percent slopes; at an elevation of 675 feet; 2,559 feet north and 45 feet west of the center of sec. 7, T. 25 N., R. 13 W.; Iroquois County, Illinois; USGS Woodworth topographic quadrangle; lat. 40 degrees 38 minutes 39 seconds N. and long. 87 degrees 52 minutes 23 seconds W., NAD 27; UTM Zone 16, 426178E and 4499628N, NAD 83:

- Ap1—0 to 10 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; weak very fine granular structure; friable; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; slightly acid; abrupt smooth boundary.
- Ap2—10 to 13 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; moderate medium angular blocky structure; friable; moderately acid; abrupt smooth boundary.
- Bg—13 to 19 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; moderate fine and medium subangular blocky structure; friable; many distinct black (10YR 2/1) organic coatings on faces of peds; common fine distinct dark grayish brown (2.5Y 4/2) and few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear wavy boundary.
- Btg1—19 to 24 inches; dark grayish brown (2.5Y 4/2) silty clay; weak medium prismatic structure parting to moderate fine and medium subangular blocky; firm; many distinct dark gray (10YR 4/1) clay films on faces of peds; many distinct black (N 2.5/) organo-clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.
- Btg2—24 to 35 inches; olive gray (5Y 5/2) silty clay; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few slickensides on faces of peds; common distinct olive gray (5Y 4/2) clay films on faces of peds; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide

- nodules throughout; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine faint dark gray (2.5Y 4/1) iron depletions in the matrix; neutral; gradual smooth boundary.
- Btg3—35 to 45 inches; gray (5Y 5/1) silty clay; weak coarse prismatic structure parting to weak coarse subangular blocky; firm; few fine roots; common distinct dark gray (5Y 4/1) clay films on faces of peds; few slickensides and pressure faces on peds; common medium prominent light olive brown (2.5Y 5/4) and few medium prominent dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.
- 2BCg—45 to 58 inches; gray (5Y 5/1) silty clay; weak very coarse prismatic structure; very firm; few fine white (10YR 8/1) very weakly cemented calcium carbonate nodules and weakly cemented calcium carbonate concretions throughout; common coarse prominent brown (10YR 4/3) and common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; slightly effervescent; moderately alkaline; clear smooth boundary.
- 2Cg—58 to 66 inches; gray (5Y 5/1) silty clay; massive; very firm; many medium prominent olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches Thickness of the colluvium: 15 to 55 inches Depth to carbonates: 24 to 60 inches

Depth to the base of soil development: 30 to more than 60 inches

Ap or A horizon:

Hue—10YR or N Value—2 or 3 Chroma—0 or 1

Texture—silty clay or silty clay loam

Bg, Btg, or BCg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 to 6 Chroma—0 to 3

Texture—silty clay or clay

Content of gravel—less than 5 percent

2BCg and 2Cg horizons:

Hue—2.5Y or 5Y

Value—4 to 6

Chroma—1 to 8

Texture—silty clay or clay; less commonly silty clay loam

Content of gravel—less than 10 percent

235A—Bryce silty clay, 0 to 2 percent slopes

Setting

Landform: Ground moraines and glacial lakes (relict)

Position on the landform: Toeslopes

Map Unit Composition

Bryce and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that have a thicker surface layer
- Soils that are more than 30 inches deep to till
- Soils that have 6 to 12 inches of silty overwash

Dissimilar soils:

- The somewhat poorly drained Swygert and Mokena soils on summits and footslopes
- The very poorly drained Rantoul soils on toeslopes

Properties and Qualities of the Bryce Soil

Parent material: Colluvium and the underlying till

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Buckhart Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon

Buckhart silt loam, in an area of Muscatune-Buckhart silt loams, 0 to 3 percent slopes; at an elevation of 679 feet; 327 feet west and 2,481 feet north of the southeast corner of sec. 18, T. 32 N., R. 1 E.; La Salle County, Illinois; USGS McNabb topographic quadrangle; lat. 41 degrees 14 minutes 34 seconds N. and long. 89 degrees 08 minutes 50 seconds W., NAD 27; UTM Zone 16, 320066E and 4567934N, NAD 83:

- Ap—0 to 8 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine and fine roots; moderately acid; abrupt smooth boundary.
- A—8 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; common very fine roots; moderately acid; clear smooth boundary.
- Bt1—14 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores;

- common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear wavy boundary.
- Bt2—21 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear wavy boundary.
- Bt3—26 to 32 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; common fine distinct strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; moderately acid; gradual wavy boundary.
- Bt4—32 to 36 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds; common fine distinct strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) and grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; gradual wavy boundary.
- BC—36 to 44 inches; yellowish brown (10YR 5/4) silt loam; weak medium and coarse subangular blocky structure; friable; many fine and medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.
- C—44 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; many medium and coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium and coarse distinct gray (10YR 6/1) iron depletions in the matrix; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess: More than 80 inches Depth to carbonates: More than 40 inches

Depth to the base of soil development: 45 to 75 inches

Ap and A horizons:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

Bt or Btg horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—3 to 6

Texture—silty clay loam or silt loam

BC, BCt, or BCg horizon:

Hue—10YR or 2.5Y

Value—5 or 6

Chroma—2 to 4

Texture—silt loam or silty clay loam

C or Cg horizon:

Hue—10YR or 2.5Y

Value—5 or 6

Chroma—2 to 6 Texture—silt loam

814A—Muscatune-Buckhart silt loams, 0 to 3 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits, footslopes, and backslopes

Map Unit Composition

Muscatune and similar soils: 55 percent Buckhart and similar soils: 35 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils underlain by till or outwash
- Soils that have slopes of more than 3 percent
- Soils that have a thinner surface layer
- Soils that have carbonates at a depth of less than 40 inches
- Soils that have a seasonal high water table at a depth of more than 3.5 feet *Dissimilar soils:*
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Muscatune Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Properties and Qualities of the Buckhart Soil

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Muscatune—1; Buckhart—2e

Prime farmland category: Prime farmland

Hydric soil status: Muscatune—not hydric; Buckhart—not hydric

Camden Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Camden silt loam, 0 to 2 percent slopes; at an elevation of 560 feet; 1,280 feet west and 1,740 feet south of the northeast corner of sec. 12, T. 15 N., R. 8 E.; Bureau County, Illinois; USGS Wyanet topographic quadrangle; lat. 41 degrees 18 minutes 05 seconds N. and long. 89 degrees 30 minutes 52 seconds W.; UTM Zone 16, 289489E and 4575265N, NAD 83:

- Ap—0 to 7 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; few fine roots; slightly acid; abrupt smooth boundary.
- E—7 to 12 inches; yellowish brown (10YR 5/4) silt loam; weak medium platy structure parting to weak fine subangular blocky; friable; few fine roots; neutral; clear smooth boundary.
- Bt1—12 to 18 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; neutral; clear smooth boundary.
- Bt2—18 to 26 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- 2Bt3—26 to 34 inches; yellowish brown (10YR 5/6) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- 2Bt4—34 to 37 inches; strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; friable; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; 7 percent gravel; slightly acid; clear smooth boundary.
- 2Bt5—37 to 48 inches; strong brown (7.5YR 5/6) sandy clay loam; 1-inch strata of yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; 5 percent gravel; slightly acid; clear smooth boundary.
- 2Bt6—48 to 53 inches; strong brown (7.5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films bridging sand grains; 2 percent gravel; neutral; clear wavy boundary.

2C—53 to 60 inches; brown (7.5YR 4/4) sandy loam that has thin strata of loamy sand; single grain; loose; 5 percent gravel; neutral.

Range in Characteristics

Thickness of the loess: 24 to 40 inches Depth to carbonates: More than 60 inches

Depth to the base of soil development: 30 to 65 inches

Ap or A horizon:

Hue-10YR

Value—3 to 5

Chroma—2 or 3

Texture—silt loam

E horizon:

Hue—10YR

Value—4 to 6

Chroma-2 to 4

Texture—silt loam

Bt horizon:

Hue-10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt or 2BC horizon:

Hue-10YR, 7.5YR, or 2.5Y

Value-4 to 6

Chroma-3 to 6

Texture—silty clay loam, clay loam, loam, sandy loam, sandy clay loam, or silt

Content of gravel—less than 10 percent

2C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—stratified sandy loam, loam, silt loam, loamy sand, sandy clay loam, or clay loam

Content of gravel—less than 13 percent

134A—Camden silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains

Position on the landform: Summits

Map Unit Composition

Camden and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker and darker surface layer
- Soils that are more than 40 inches deep to outwash

- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have slopes of more than 2 percent
- · Soils that are underlain by gravel

Dissimilar soils:

• The somewhat poorly drained Starks soils on summits and footslopes

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

134B—Camden silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Shoulders and backslopes

Map Unit Composition

Camden and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are underlain by gravel
- Soils that are moderately eroded
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are more than 40 inches deep to outwash

Dissimilar soils:

• The somewhat poorly drained Starks soils on summits and footslopes

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

134C2—Camden silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces Position on the landform: Shoulders and backslopes

Map Unit Composition

Camden and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- · Soils that are underlain by gravel
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that are more than 40 inches deep to outwash
- Soils that have slopes of less than 5 percent or more than 10 percent *Dissimilar soils:*
- The somewhat poorly drained Starks soils on summits and footslopes

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.5 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

134D2—Camden silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Shoulders and backslopes

Map Unit Composition

Camden and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- · Soils that are severely eroded
- · Soils that are underlain by till
- Soils that have slopes of less than 10 percent or more than 18 percent
- Soils that are more than 40 inches deep to outwash
- · Soils that are underlain by gravel

Dissimilar soils:

• The somewhat poorly drained Starks soils on summits and footslopes

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.5 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

134D3—Camden silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Backslopes and shoulders

Map Unit Composition

Camden and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that are underlain by till
- Soils that have slopes of less than 10 percent or more than 18 percent
- Soils that are more than 40 inches deep to outwash
- · Soils that are underlain by gravel

Dissimilar soils:

• The somewhat poorly drained Starks soils on summits and footslopes

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

134F—Camden silt loam, 18 to 35 percent slopes

Setting

Landform: Outwash plains

Position on the landform: Backslopes

Map Unit Composition

Camden and similar soils: 100 percent

Soils of Minor Extent

Similar soils:

- · Soils that are underlain by till
- Soils that are moderately eroded
- Soils that have slopes of less than 18 percent or more than 35 percent
- Soils that are more than 40 inches deep to outwash
- · Soils that are underlain by gravel

Properties and Qualities of the Camden Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Campton Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Campton silt loam, 2 to 5 percent slopes; at an elevation of 870 feet; 1,500 feet south and 2,000 feet west of the northeast corner of sec. 27, T. 40 N., R. 6 E.; Kane County, Illinois; USGS Maple Park topographic quadrangle; lat. 41 degrees 55 minutes 11 seconds N. and long. 88 degrees 32 minutes 04 seconds W., NAD 27; UTM Zone 16, 372794E and 4642017N, NAD 83:

- Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; common very fine roots; neutral; abrupt smooth boundary.
- Bt1—8 to 13 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; neutral; clear smooth boundary.
- Bt2—13 to 19 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common

distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds and in pores; neutral; gradual wavy boundary.

- Bt3—19 to 27 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine black (7.5YR 2.5/1) very weakly cemented manganese oxide concretions throughout; common fine faint brown (7.5YR 5/4) and common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.
- Bt4—27 to 33 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine black (7.5YR 2.5/1) very weakly cemented manganese oxide concretions throughout; common fine distinct and prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; gradual wavy boundary.
- Bt5—33 to 45 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse prismatic structure parting to weak medium subangular blocky; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine black (7.5YR 2.5/1) very weakly cemented manganese oxide concretions throughout; common fine distinct and prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; many fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; gradual wavy boundary.
- 2BC—45 to 51 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; few fine black (7.5YR 2.5/1) very weakly cemented manganese oxide concretions throughout; common fine distinct and prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; 4 percent gravel; strongly acid; clear wavy boundary.
- 2C1—51 to 58 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; common fine distinct and prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; 4 percent gravel; strongly acid; gradual wavy boundary.
- 2C2—58 to 65 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; very friable; common fine distinct and prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 2 percent gravel; slightly acid; gradual wavy boundary.
- 2Cg—65 to 80 inches; light brownish gray (2.5Y 6/2) loam; massive; friable; common fine black (7.5YR 2.5/1) very weakly cemented manganese oxide concretions throughout; common fine prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; 1 percent gravel; slightly acid.

Range in Characteristics

Thickness of the loess: 40 to 60 inches Depth to carbonates: More than 40 inches

Depth to the base of soil development: 48 to 70 inches

Ap or A horizon: Hue—10YR Value—3 to 5 Chroma—1 to 3
Texture—silt loam

E horizon (where present):

Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5 Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt or 2BC horizon:

Hue-7.5YR or 10YR

Value—4 to 6 Chroma—2 to 6

Texture—silt loam, loam, sandy loam, clay loam, or sandy clay loam

Content of gravel—less than 15 percent

2C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma-2 to 6

Texture—silt loam, loam, sandy loam, or loamy sand or the gravelly analogs of these textures

Content of gravel—less than 20 percent

680B—Campton silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and backslopes

Map Unit Composition

Campton and similar soils: 93 percent

Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker and darker surface layer
- Soils that have outwash at a depth of less than 40 inches or more than 60 inches
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Campton Soil

Parent material: Loess and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Casco Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Inceptic Hapludalfs

Typical Pedon

Casco silt loam, in an area of Hennepin-Casco complex, 30 to 60 percent slopes; at an elevation of 660 feet; 2,400 feet south and 2,030 feet east of the northwest corner of sec. 28, T. 17 N., R. 9 E.; Bureau County, Illinois; USGS Princeton North topographic quadrangle; lat. 41 degrees 25 minutes 48 seconds N. and long. 89 degrees 27 minutes 50 seconds W.; UTM Zone 16, 294122E and 4589432N, NAD 83:

- A—0 to 7 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; common fine roots; neutral; abrupt smooth boundary.
- Bt—7 to 15 inches; brown (10YR 4/3) gravelly loam; moderate fine and medium subangular blocky structure; friable; few fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; 30 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- C1—15 to 31 inches; dark yellowish brown (10YR 4/4), stratified sand and gravel; single grain; loose; 40 percent gravel; violently effervescent; slightly alkaline; clear smooth boundary.
- C2—31 to 60 inches; yellowish brown (10YR 5/4), stratified sand and gravel; single grain; loose; 60 percent gravel; violently effervescent; slightly alkaline.

Range in Characteristics

Depth to stratified sandy outwash: 10 to 20 inches

Depth to carbonates: 10 to 20 inches

Ap or A horizon:

Hue—10YR or 7.5YR

Value—2 to 4

Chroma—1 to 3

Texture—sandy loam, fine sandy loam, loam, silt loam, gravelly loam, or gravelly sandy loam

Content of gravel—less than 35 percent Content of cobbles—less than 5 percent

E horizon (where present):

Hue—10YR or 7.5YR

Value—4 or 5

Chroma-2 or 3

Texture—sandy loam, fine sandy loam, loam, silt loam, gravelly loam, or gravelly sandy loam

Content of gravel—less than 35 percent Content of cobbles—less than 5 percent

Rt horizon:

Hue-10YR, 7.5YR, or 5YR

Value—3 to 5

Chroma—3 or 4

Texture—sandy clay loam, loam, or clay loam or the gravelly analogs of these textures

Content of gravel—less than 35 percent Content of cobbles—less than 5 percent

2C horizon:

Hue—10YR or 7.5YR

Value—4 to 7

Chroma-3 or 4

Texture—stratified sand or coarse sand or the gravelly, very gravelly, or extremely gravelly analogs of these textures; or strata of gravel

Content of gravel—less than 95 percent Content of cobbles—less than 50 percent

820E—Hennepin-Casco complex, 12 to 30 percent slopes

Setting

Landform: End moraines, outwash plains, and stream terraces

Position on the landform: Backslopes

Map Unit Composition

Hennepin and similar soils: 50 percent Casco and similar soils: 35 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that are deeper to till or gravelly outwash
- Soils that have slopes of less than 12 percent or more than 30 percent
- · Soils that have a thicker subsoil
- Soils that are more than 20 inches deep to carbonates

Dissimilar soils:

The moderately deep Marseilles soils on backslopes

Properties and Qualities of the Hennepin Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hennepin—6e; Casco—6e

Prime farmland category: Not prime farmland

Hydric soil status: Hennepin—not hydric; Casco—not hydric

820G—Hennepin-Casco complex, 30 to 60 percent slopes

Setting

Landform: End moraines, outwash plains, and stream terraces

Position on the landform: Backslopes

Map Unit Composition

Hennepin and similar soils: 50 percent Casco and similar soils: 35 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker subsoil
- Soils that are more than 20 inches deep to carbonates
- Soils that are deeper to till or gravelly outwash
- Soils that have slopes of less than 30 percent or more than 60 percent

Dissimilar soils:

• The moderately deep Marseilles soils on backslopes

Properties and Qualities of the Hennepin Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial

deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Floodina: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hennepin—7e; Casco—7e

Prime farmland category: Not prime farmland

Hydric soil status: Hennepin—not hydric; Casco—not hydric

969E2—Casco-Rodman complex, 12 to 20 percent slopes, eroded

Setting

Landform: Kames, outwash plains, and end moraines

Position on the landform: Backslopes

Map Unit Composition

Casco and similar soils: 50 percent

Rodman and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

• Soils that are severely eroded or only slightly eroded

- Soils that are more than 20 inches deep to sandy and gravelly deposits
- Soils that have carbonates at or near the surface
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 12 percent or more than 20 percent *Dissimilar soils:*
- · Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Rodman Soil

Parent material: Sandy and gravelly glaciofluvial deposits

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 2.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Low

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: High Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Casco—6e; Rodman—6s

Prime farmland category: Not prime farmland

Hydric soil status: Casco—not hydric; Rodman—not hydric

969F—Casco-Rodman complex, 20 to 30 percent slopes

Setting

Landform: Kames, outwash plains, and end moraines

Position on the landform: Backslopes

Map Unit Composition

Casco and similar soils: 50 percent Rodman and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that are more than 20 inches deep to sandy and gravelly deposits
- Soils that have carbonates at or near the surface
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 20 percent or more than 30 percent Dissimilar soils:
- Severely eroded soils on shoulders and backslopes
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 3.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Rodman Soil

Parent material: Sandy and gravelly glaciofluvial deposits

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 2.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Low

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: High Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Casco—7e; Rodman—7s

Prime farmland category: Not prime farmland

Hydric soil status: Casco—not hydric; Rodman—not hydric

Catlin Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls **Taxadjunct features:** The Catlin soils in map units 171B2, 171C2, and 171C3 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. The Catlin soils in map units 171B2 and 171C2 are classified as fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs. The Catlin soil in map unit 171C3 is classified as a fine-silty, mixed, superactive, mesic Oxyaquic Hapludalf.

Typical Pedon

Catlin silt loam, 0 to 2 percent slopes; at an elevation of 830 feet; 650 feet south and 571 feet east of the northwest corner of sec. 36, T. 42 N., R. 2 E.; Ogle County, Illinois; USGS Fairdale topographic quadrangle; lat. 42 degrees 04 minutes 38 seconds N. and long. 88 degrees 57 minutes 17 seconds W., NAD 27; UTM Zone 16, 338298E and 4660202N, NAD 83:

- Ap—0 to 11 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.
- BA—11 to 18 inches; brown (10YR 4/3) silt loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few faint dark brown (10YR 3/3) organic coatings on faces of peds; common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
- Bt1—18 to 23 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to strong fine and medium subangular blocky; friable; many faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.
- Bt2—23 to 31 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to strong medium angular and subangular blocky; firm; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; many faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few black (N 2.5/) weakly cemented iron and manganese oxide concretions throughout; few fine distinct brown (7.5YR 4/4) and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Bt3—31 to 36 inches; yellowish brown (10YR 5/4) silty clay loam; strong medium prismatic structure parting to strong medium angular and subangular blocky; firm; common prominent grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few black (N 2.5/) weakly cemented iron and manganese oxide concretions throughout; few fine distinct brown (7.5YR 4/4) and yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- Bt4—36 to 44 inches; yellowish brown (10YR 5/4), brown (7.5YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; weak coarse prismatic structure parting to

moderate coarse subangular blocky; firm; many faint grayish brown (2.5Y 5/2) clay films on faces of peds; common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; slightly acid; abrupt smooth boundary.

- 2Bt5—44 to 49 inches; dark yellowish brown (10YR 4/4) clay loam; weak coarse subangular blocky structure; firm; few faint brown (10YR 5/3) clay films on vertical faces of peds; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; slightly alkaline; clear smooth boundary.
- 2C—49 to 60 inches; yellowish brown (10YR 5/4) loam; massive; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess: 40 to 60 inches Depth to carbonates: 40 to 60 inches

Depth to the base of soil development: 45 to 65 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

Bt or BA horizon:

Hue-10YR or 2.5Y

Value—3 to 5

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—4 or 5

Chroma-2 to 8

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—less than 10 percent

2C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—4 or 5

Chroma-2 to 8

Texture—loam, clay loam, or silt loam Content of gravel—less than 10 percent

171A—Catlin silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Summits

Map Unit Composition

Catlin and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have till within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of more than 2 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

171B—Catlin silt loam, 2 to 5 percent slopes

Settina

Landform: Ground moraines and end moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Catlin and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have till within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile

Dissimilar soils:

• The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

171B2—Catlin silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines Position on the landform: Summits and backslopes

Map Unit Composition

Catlin and similar soils: 93 percent

Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:

- Soils that are severely eroded or only slightly eroded
- Soils that have till within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.5 to 3.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

171C2—Catlin silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Summits and backslopes

Map Unit Composition

Catlin and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are severely eroded or only slightly eroded
- Soils that have till within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile *Dissimilar soils:*
- The nearly level, somewhat poorly drained Flanagan soils on summits
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.5 to 3.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

171C3—Catlin silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Catlin and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have till within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have more clay and less sand in the middle and lower parts of the profile Dissimilar soils:
- The nearly level, somewhat poorly drained Flanagan soils on summits
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.8 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

818A—Flanagan-Catlin silt loams, 0 to 3 percent slopes Setting

Landform: Ground moraines and end moraines

Position on the landform: Flanagan—summits and footslopes in areas where slopes are generally less than 2 percent; Catlin—knolls and summits in areas where slopes are generally more than 1 percent

Map Unit Composition

Flanagan and similar soils: 55 percent Catlin and similar soils: 35 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches or more than 60 inches deep to till
- Soils that have a thinner surface layer
- Soils that have slopes of more than 3 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Flanagan Soil

Parent material: Loess over loamy till Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Flanagan—1; Catlin—1

Prime farmland category: Prime farmland

Hydric soil status: Flanagan—not hydric; Catlin—not hydric

Channahon Series

Taxonomic classification: Loamy, mixed, superactive, mesic Lithic Argiudolls **Taxadjunct features:** The Channahon soils in map units 817A and 817B are underlain by sandstone bedrock instead of limestone or dolostone bedrock. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as coarse-loamy, mixed, superactive, mesic Typic Argiudolls.

Typical Pedon

Channahon silt loam, 2 to 4 percent slopes; at an elevation of 530 feet; 384 feet east and 125 feet south of the northwest corner of sec. 35, T. 34 N., R. 8 E.; Grundy County, Illinois; USGS Minooka topographic quadrangle; lat. 41 degrees 23 minutes 20 seconds N. and long. 88 degrees 17 minutes 12 seconds W., NAD 27; UTM Zone 16, 392422E and 4582730N, NAD 83:

- A1—0 to 5 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine to medium roots; neutral; gradual wavy boundary.
- A2—5 to 11 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium subangular blocky structure; friable; common very fine to medium roots; neutral; gradual wavy boundary.
- Bt1—11 to 15 inches; dark yellowish brown (10YR 3/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; many distinct very dark gray (10YR 3/1) organic coatings in root channels and pores; neutral; gradual wavy boundary.
- Bt2—15 to 18 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; common very fine to medium roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few prominent very dark gray (10YR 3/1) organic coatings in root channels and pores; 2 percent gravel; neutral; clear smooth boundary.
- 2R—18 inches; gray (10YR 6/1) limestone bedrock; strongly effervescent.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches

Depth to bedrock: 10 to 20 inches

Depth to the base of soil development: 10 to 20 inches

A horizon:

Hue—10YR Value—2 or 3 Chroma—1 or 2

Texture—loam or silt loam; fine sandy loam in pedons underlain by sandstone

Bt horizon:

Hue—7.5YR or 10YR

Value—3 to 5 Chroma—3 or 4

Texture—loam, silt loam, clay loam, or silty clay loam or the gravelly analogs of these textures; fine sandy loam, sandy loam, loamy fine sand, or sand or the gravelly analogs of these textures in pedons underlain by sandstone

Content of gravel—less than 20 percent

315B—Channahon silt loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Channahon and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have bedrock at a depth of less than 10 inches or more than 20 inches
- Soils that have less sand and more clay in the control section
- Soils that have slopes of less than 2 percent or more than 4 percent
- · Soils that have sandy residuum over the sandstone
- Soils that are moderately eroded

Dissimilar soils:

- Shallow, somewhat poorly drained soils on summits and footslopes
- The poorly drained Faxon soils on toeslopes

Properties and Qualities of the Channahon Soil

Parent material: Drift over dolostone or limestone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic) Available water capacity: About 3.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

817A—Channahon-Hesch fine sandy loams, 0 to 2 percent slopes

Setting

Landform: Outwash plains, flood-plain steps, and stream terraces

Position on the landform: Summits

Map Unit Composition

Channahon and similar soils: 50 percent Hesch and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 10 inches deep to sandstone bedrock
- Soils that are more than 40 inches deep to sandstone bedrock
- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have a lighter colored surface layer
- Soils that have a thinner surface layer
- Soils that have more than 15 percent rock fragments in the profile *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Faxon soils on toeslopes
- The very poorly drained Peotone soils on toeslopes

Properties and Qualities of the Channahon Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic) Available water capacity: About 2.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Properties and Qualities of the Hesch Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 4.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: Channahon—3s; Hesch—2s

Prime farmland category: Not prime farmland

Hydric soil status: Channahon—not hydric; Hesch—not hydric

817B—Channahon-Hesch fine sandy loams, 2 to 6 percent slopes

Setting

Landform: Flood-plain steps, outwash plains, and stream terraces

Position on the landform: Backslopes and summits

Map Unit Composition

Channahon and similar soils: 50 percent Hesch and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 10 inches deep to sandstone bedrock
- Soils that are more than 40 inches deep to sandstone bedrock
- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have a lighter colored surface layer
- Soils that are moderately eroded
- Soils that have more than 15 percent rock fragments in the profile
- Soils that have slopes of more than 6 percent

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Faxon soils on toeslopes
- The very poorly drained Peotone soils on toeslopes

Properties and Qualities of the Channahon Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic) Available water capacity: About 2.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Properties and Qualities of the Hesch Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 3.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: Channahon—3e; Hesch—2e

Prime farmland category: Not prime farmland

Hydric soil status: Channahon—not hydric; Hesch—not hydric

Chatsworth Series

Taxonomic classification: Fine, illitic, mesic Oxyaquic Eutrudepts

Typical Pedon

Chatsworth silty clay, 6 to 12 percent slopes, severely eroded; at an elevation of 735 feet; 148 feet north and 1,870 feet west of the southeast corner of sec. 7, T. 24 N., R. 10 E.; Iroquois County, Illinois; USGS Buckley topographic quadrangle; lat. 40 degrees 32 minutes 48 seconds N. and long. 88 degrees 06 minutes 20 seconds W., NAD 27; UTM Zone 16, 406382E and 4489026N, NAD 83:

Ap—0 to 2 inches; dark grayish brown (2.5Y 4/2) silty clay, light brownish gray (10YR 6/2) dry; moderate medium granular structure; firm; common medium roots; slightly effervescent; moderately alkaline; abrupt smooth boundary.

Bw1—2 to 11 inches; dark grayish brown (2.5Y 4/2) silty clay; moderate very fine and fine subangular blocky structure; firm; few medium and fine roots; few fine white (10YR 8/1) very weakly cemented calcium carbonate nodules throughout; few fine distinct olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; common

fine faint dark gray (5Y 4/1) iron depletions in the matrix; strongly effervescent; moderately alkaline; clear wavy boundary.

- Bw2—11 to 15 inches; dark grayish brown (2.5Y 4/2) silty clay; weak medium prismatic structure parting to moderate fine and medium angular blocky; very firm; few fine roots between peds; common faint dark gray (5Y 4/1) coatings on faces of peds; common medium white (10YR 8/1) very weakly cemented calcium carbonate nodules throughout; common fine distinct olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; common fine faint dark gray (5Y 4/1) iron depletions in the matrix; strongly effervescent; moderately alkaline; gradual wavy boundary.
- Bw3—15 to 22 inches; grayish brown (2.5Y 5/2) silty clay; moderate medium prismatic structure parting to weak medium subangular blocky; very firm; few fine roots between peds; common faint dark gray (5Y 4/1) coatings on faces of peds; common medium white (10YR 8/1) very weakly cemented calcium carbonate nodules throughout; common fine distinct olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; common fine faint dark gray (5Y 4/1) iron depletions in the matrix; strongly effervescent; moderately alkaline; gradual wavy boundary.
- Cd1—22 to 35 inches; dark grayish brown (2.5Y 4/2) silty clay; massive; very firm; few fine roots along cleavage planes; many faint gray (5Y 5/1) coatings along cleavage planes; few medium white (10YR 8/1) very weakly cemented calcium carbonate nodules along cleavage planes; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine faint gray (5Y 5/1) iron depletions in the matrix; strongly effervescent; moderately alkaline; gradual wavy boundary.
- Cd2—35 to 60 inches; dark gray (5Y 4/1) silty clay; massive; very firm; very few fine roots along widely spaced cleavage planes; many faint gray (5Y 5/1) coatings along cleavage planes; few medium white (10YR 8/1) very weakly cemented calcium carbonate nodules along cleavage planes; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to carbonates: Less than 20 inches Depth to the base of soil development: 10 to 24 inches

A or Ap horizon:

Hue—10YR, 2.5Y, or 5Y

Value—3 or 4

Chroma-1 or 2

Texture—silty clay, silty clay loam, silt loam, loam, or clay

Content of gravel—less than 3 percent

Bw horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma-2 or 3

Texture—silty clay or clay; less commonly silty clay loam

Content of gravel—less than 3 percent

Cd horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—1 to 6

Texture—silty clay, clay, or silty clay loam Content of gravel—less than 10 percent

241C3—Chatsworth silty clay, 4 to 6 percent slopes, severely eroded

Setting

Landform: End moraines and ground moraines

Position on the landform: Backslopes

Map Unit Composition

Chatsworth and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 4 percent or more than 6 percent
- Soils that have carbonates at a depth of more than 20 inches
- Soils that are moderately eroded
- · Soils that have outwash above the till

Dissimilar soils:

- The noncalcareous Varna and Ozaukee soils on backslopes and shoulders
- The slightly eroded, noncalcareous, somewhat poorly drained Swygert and Nappanee soils on backslopes and shoulders
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Chatsworth Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 24 inches to dense material Available water capacity: About 3.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 6e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

241D3—Chatsworth silty clay, 6 to 12 percent slopes, severely eroded

Setting

Landform: End moraines and ground moraines

Position on the landform: Backslopes

Map Unit Composition

Chatsworth and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have carbonates at a depth of more than 20 inches
- Soils that have slopes of less than 6 percent or more than 12 percent
- Soils that are moderately eroded

Dissimilar soils:

- The noncalcareous Varna, Ozaukee, and St. Clair soils on backslopes and shoulders
- The slightly eroded, noncalcareous, somewhat poorly drained Swygert and Nappanee soils on backslopes and shoulders
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Chatsworth Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 24 inches to dense material Available water capacity: About 3.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

241E3—Chatsworth silty clay, 12 to 20 percent slopes, severely eroded

Setting

Landform: End moraines and ground moraines

Position on the landform: Backslopes

Map Unit Composition

Chatsworth and similar soils: 96 percent

Dissimilar soils: 4 percent

Soils of Minor Extent

Similar soils:

- Soils that have carbonates at a depth of more than 20 inches
- Soils that have slopes of less than 12 percent or more than 20 percent
- Soils that are moderately eroded

Dissimilar soils:

- The noncalcareous St. Clair soils on backslopes and shoulders
- The slightly eroded, noncalcareous, somewhat poorly drained Swygert and Nappanee soils on backslopes and shoulders

Properties and Qualities of the Chatsworth Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 24 inches to dense material Available water capacity: About 3.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

241F—Chatsworth silty clay loam, 20 to 30 percent slopes

Setting

Landform: End moraines and ground moraines

Position on the landform: Backslopes

Map Unit Composition

Chatsworth and similar soils: 96 percent

Dissimilar soils: 4 percent

Soils of Minor Extent

Similar soils:

Soils that are moderately eroded

• Soils that have slopes of less than 20 percent or more than 30 percent

• Soils that have carbonates at a depth of more than 20 inches *Dissimilar soils:*

Severely eroded soils on backslopes

Properties and Qualities of the Chatsworth Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 24 inches to dense material Available water capacity: About 3.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

241G—Chatsworth silty clay loam, 30 to 50 percent slopes

Setting

Landform: End moraines

Position on the landform: Backslopes

Map Unit Composition

Chatsworth and similar soils: 96 percent

Dissimilar soils: 4 percent

Soils of Minor Extent

Similar soils:

- Soils that have carbonates at a depth of more than 20 inches
- Soils that have slopes of less than 30 percent
- Soils that are moderately eroded

Dissimilar soils:

Severely eroded soils on backslopes

Properties and Qualities of the Chatsworth Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 24 inches to dense material Available water capacity: About 3.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Chenoa Series

Taxonomic classification: Fine, illitic, mesic Aquic Argiudolls

Typical Pedon

Chenoa silty clay loam, 0 to 2 percent slopes; at an elevation of 691 feet; 105 feet south and 865 feet west of the northeast corner of sec. 2, T. 27 N., R. 3 E.; Livingston County, Illinois; USGS Flanagan South topographic quadrangle; lat. 40 degrees 50 minutes 31 seconds N. and long. 88 degrees 50 minutes 13 seconds W., NAD 27; UTM Zone 16, 345124E and 4522838N, NAD 83:

- Ap—0 to 12 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; few fine roots; neutral; abrupt smooth boundary.
- BA—12 to 16 inches; brown (10YR 4/3) silty clay loam; weak fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; many distinct black (10YR 2/1) organic coatings on faces of peds; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt—16 to 21 inches; brown (10YR 4/3) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine distinct gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- Btg1—21 to 26 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; many distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common medium black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- Btg2—26 to 32 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; friable; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common medium black (10YR 2/1) very weakly cemented iron and

manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.

- 2Bt—32 to 36 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure parting to weak medium angular blocky; firm; few very fine roots; few distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common medium distinct gray (2.5Y 6/1) iron depletions in the matrix; 3 percent gravel; slightly alkaline; clear smooth boundary.
- 2C—36 to 60 inches; light olive brown (2.5Y 5/4) silty clay loam; massive; firm; few prominent light brownish gray (10YR 6/2) coatings on vertical cleavage planes; common medium distinct gray (2.5Y 6/1) iron depletions in the matrix; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 20 to 40 inches

Depth to carbonates: 25 to 45 inches

Depth to the base of soil development: 25 to 50 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 or 2

Texture—silty clay loam or silt loam

Bt horizons:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—2 to 6

Texture—silty clay loam or silty clay

2Bt horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6

Texture—silty clay loam or silt loam Content of gravel—1 to 10 percent

2C horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6

Texture—silty clay loam or silt loam Content of gravel—2 to 10 percent

614A—Chenoa silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Summits and footslopes

Map Unit Composition

Chenoa and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less silt in the upper one-half of the profile
- Soils that have a thinner surface layer
- Soils that have slopes of less than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Chenoa Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

614B—Chenoa silty clay loam, 2 to 5 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Backslopes and footslopes

Map Unit Composition

Chenoa and similar soils: 88 percent

Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less silt in the upper one-half of the profile
- Soils that are moderately eroded
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Chenoa Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Clare Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon

Clare silt loam, 0 to 2 percent slopes; at an elevation of 750 feet; 1,200 feet north and 2,200 feet east of the southwest corner of sec. 7, T. 42 N., R. 3 E.; De Kalb County, Illinois; USGS Cherry Valley topographic quadrangle; lat. 42 degrees 07 minutes 32 seconds N. and long. 88 degrees 55 minutes 51 seconds W., NAD 27; UTM Zone 16, 340388E and 4665526N, NAD 83:

- Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- A—5 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium subangular blocky structure; friable; common very fine roots; neutral; clear smooth boundary.
- BA—11 to 14 inches; 60 percent dark yellowish brown (10YR 4/4) and 40 percent very dark grayish brown (10YR 3/2) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; neutral; gradual wavy boundary.
- Bt1—14 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to weak fine and medium subangular blocky; friable; common fine roots; common distinct very dark grayish brown (10YR 3/2) organoclay films on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.
- Bt2—21 to 28 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; slightly acid; gradual wavy boundary.

- Bt3—28 to 32 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium and coarse subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium prominent grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.
- 2Bt4—32 to 37 inches; dark yellowish brown (10YR 4/4) loam; moderate medium and coarse subangular blocky structure; friable; few very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium prominent grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; clear wavy boundary.
- 2Bt5—37 to 45 inches; brown (7.5YR 4/4) sandy loam; weak medium and coarse angular blocky structure; friable; few very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium prominent dark grayish brown (10YR 4/2) iron depletions in the matrix; 2 percent gravel; neutral; gradual wavy boundary.
- 2Bt6—45 to 61 inches; brown (7.5YR 4/4) clay loam; weak medium and coarse angular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds; common medium black (10YR 2/1) very weakly cemented manganese oxide concretions throughout; common medium yellowish brown (10YR 5/6) very weakly cemented iron oxide concretions throughout; 5 percent gravel; neutral; clear smooth boundary.
- 2C—61 to 80 inches; brown (7.5YR 5/4), stratified gravelly sandy loam and loam; massive; friable; 17 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of loess or silty material: 20 to 40 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 70 inches

Ap or A horizon:

Hue-10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

Bt or BA horizon:

Hue—7.5YR or 10YR

Value—3 to 6

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value-4 to 6

Chroma—3 to 6

Texture—loam, sandy loam, clay loam, silt loam, sandy clay loam, or silty clay loam

Content of gravel—less than 15 percent

2C horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6 Chroma—3 to 6

Texture—stratified loam, sandy loam, loam, or silt loam or the gravelly analogs of these textures with thin strata of loamy sand or sand

Content of gravel-2 to 20 percent

663B—Clare silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Clare and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have outwash at a depth of more than 40 inches
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have till in the lower part of the profile

Dissimilar soils:

The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Clare Soil

Parent material: Loess over outwash Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Clarence Series

Taxonomic classification: Fine, illitic, mesic Aquic Argiudolls

Taxadjunct features: The Clarence soils in this survey area have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine, illitic, mesic Aquollic Hapludalfs.

Typical Pedon

Clarence silty clay loam, 2 to 4 percent slopes, eroded; at an elevation of 744 feet; 117 feet east and 1,400 feet south of the northwest corner of sec. 12, T. 29 N., R. 5 E.; Livingston County, Illinois; USGS Odell topographic quadrangle; lat. 41 degrees 00 minutes 04 seconds N. and long. 88 degrees 36 minutes 17 seconds W.; UTM Zone 16, 365036E and 4540103N, NAD 83:

- Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- Bt1—8 to 12 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.
- Bt2—12 to 16 inches; dark grayish brown (2.5Y 4/2) silty clay; moderate fine subangular blocky structure; very firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bt3—16 to 21 inches; grayish brown (2.5Y 5/2) silty clay; moderate fine subangular blocky structure; very firm; few very fine roots; common fine dark grayish brown (2.5Y 4/2) clay films on faces of peds; common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bt4—21 to 26 inches; grayish brown (2.5Y 5/2) silty clay; weak medium prismatic structure parting to moderate fine angular blocky; very firm; few very fine roots; common fine dark grayish brown (2.5Y 4/2) clay films on faces of peds; moderate medium distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; 2 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- BC—26 to 35 inches; 60 percent light olive brown (2.5Y 5/4) and 40 percent gray (5Y 5/1) silty clay; moderate medium prismatic structure; very firm; common faint gray (5Y 5/1) clay films on vertical faces of peds; few medium calcium carbonate concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; strongly effervescent; moderately alkaline; clear smooth boundary.
- Cd—35 to 60 inches; 60 percent light olive brown (2.5Y 5/4) and 40 percent gray (5Y 5/1) silty clay; massive; very firm; common fine black (2.5Y 5/) pressure faces on vertical cleavage planes; common medium calcium carbonate concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to carbonates: 20 to 38 inches

Depth to the base of soil development: 25 to 40 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silty clay loam, silt loam, or silty clay

Bt horizon:

Hue—10YR or 2.5Y

Value—4 or 5

Chroma—1 to 4 in the upper part; 2 to 6 in the lower part

Texture—silty clay loam, silty clay, or clay Content of gravel—less than 5 percent

BC horizon (where present):

Hue-2.5Y or 5Y

Value—4 or 5

Chroma—2 to 4

Texture—silty clay or clay

Content of gravel—less than 5 percent

Cd horizon:

Hue—2.5Y, 5Y, or 5GY

Value—4 to 6

Chroma-1 to 6

Texture—silty clay or clay

Content of gravel—less than 5 percent

147B2—Clarence silty clay loam, 2 to 4 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Backslopes and footslopes

Map Unit Composition

Clarence and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have more silt and less clay in the control section
- Soils that have slopes of more than 4 percent
- Soils that are severely eroded or only slightly eroded

Dissimilar soils:

• The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Clarence Soil

Parent material: Till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Impermeable Permeability below a depth of 60 inches: Impermeable or very slow Depth to restrictive feature: 25 to 40 inches to dense material Available water capacity: About 4.8 inches to a depth of 60 inches

Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Very high Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Danabrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls **Taxadjunct features:** The Danabrook soil in map unit 512C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Danabrook silt loam, 2 to 5 percent slopes; at an elevation of 872 feet; 176 feet south and 2,334 feet west of the northeast corner of sec. 5, T. 42 N., R. 5 E.; De Kalb County, Illinois; USGS Riley topographic quadrangle; lat. 42 degrees 09 minutes 09 seconds N. and long. 88 degrees 40 minutes 28 seconds W., NAD 27; UTM Zone 16, 361649E and 4668068N, NAD 83:

- Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak very fine and fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- A—8 to 13 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- Bt1—13 to 21 inches; brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; friable; common very fine roots; few faint dark brown (10YR 3/3) clay films and very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; neutral; clear smooth boundary.
- Bt2—21 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.
- Bt3—26 to 33 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese

oxide concretions throughout; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

- 2Bt4—33 to 42 inches; brown (7.5YR 5/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 6 percent gravel; slightly alkaline; clear wavy boundary.
- 2BC—42 to 50 inches; brown (7.5YR 5/4) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.
- 2C—50 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 10 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess or silty material: 22 to 40 inches

Depth to carbonates: 30 to 50 inches

Depth to the base of soil development: 30 to 55 inches

Ap or A horizon:

Hue-10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 to 6

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt or 2BC horizon:

Hue—7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—loam, clay loam, or sandy clay loam

Content of gravel—2 to 15 percent

2C horizon:

Hue-7.5YR

Value-4 to 6

Chroma—3 to 6

Texture—loam or sandy loam

Content of gravel—2 to 15 percent

512B—Danabrook silt loam, 2 to 5 percent slopes

Setting

Landform: End moraines and ground moraines Position on the landform: Summits and backslopes

Map Unit Composition

Danabrook and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have more sand and less silt in the upper and middle parts of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

512C2—Danabrook silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: End moraines and ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Danabrook and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

Soils that are severely eroded

- Soils that have more sand and less silt in the upper and middle parts of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 5 percent or more than 10 percent Dissimilar soils:
- Nearly level, somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls **Taxadjunct features:** The Dickinson soil in map unit 87C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a coarse-loamy, mixed, superactive, mesic Dystric Eutrudept.

Typical Pedon

Dickinson sandy loam, 0 to 2 percent slopes; at an elevation of 617 feet; 360 feet north and 1,720 feet west of the center of sec. 17, T. 17 N., R. 6 E.; Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 37 seconds N. and

long. 89 degrees 50 minutes 09 seconds W., NAD 27; UTM Zone 16, 263148E and 4593741N, NAD 83:

- Ap—0 to 8 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; few fine roots; moderately acid; abrupt smooth boundary.
- A1—8 to 15 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.
- A2—15 to 20 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; very friable; few fine roots; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- Bw—20 to 31 inches; brown (10YR 4/3) sandy loam; weak medium prismatic structure parting to weak medium subangular blocky; very friable; few fine roots; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- Bt—31 to 36 inches; yellowish brown (10YR 5/6) loamy sand; weak medium prismatic structure parting to weak medium subangular blocky; very friable; common distinct brown (10YR 4/3) clay films bridging sand grains; slightly acid; clear smooth boundary.
- BC—36 to 47 inches; yellowish brown (10YR 5/6) sand; weak coarse prismatic structure; very friable; moderately acid; clear smooth boundary.
- C—47 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; strong brown (7.5YR 5/6) bands ¹/₂ inch to 2 inches thick at depths of 52, 56, and 58 inches; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches Depth to carbonates: More than 59 inches

Ap or A horizon:

Hue—10YR

Value-2 or 3

Chroma—1 to 3

Texture—fine sandy loam, sandy loam, or loam

Bw horizon:

Hue-10YR or 2.5Y

Value-3 to 5

Chroma—2 to 4

Texture—sandy loam or fine sandy loam

Bt. BC. and/or C horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma-3 to 6

Texture—loamy sand, sand, loamy fine sand, or fine sand

87A—Dickinson sandy loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains

Position on the landform: Summits

Map Unit Composition

Dickinson and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

• Soils that have less sand and more clay in the control section

Soils that have slopes of more than 2 percent

Dissimilar soils:

• The somewhat poorly drained Ridgeville soils on summits and footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Very low Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

87B—Dickinson sandy loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Shoulders and summits

Map Unit Composition

Dickinson and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have less sand and more clay in the control section
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The somewhat poorly drained Ridgeville soils on summits and footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Very low Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

87C2—Dickinson sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Dunes

Position on the landform: Backslopes

Map Unit Composition

Dickinson and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that are severely eroded or only slightly eroded
- Soils that have less sand and more clay in the control section
- Soils that have slopes of less than 5 percent or more than 10 percent Dissimilar soils:
- The somewhat poorly drained Ridgeville soils on summits and footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Dresden Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Mollic Hapludalfs

Typical Pedon

Dresden silt loam, 2 to 4 percent slopes; at an elevation of 580 feet; 1,460 feet south and 140 feet east of the northwest corner of sec. 10, T. 34 N., R. 9 E.; Will County, Illinois; USGS Channahon topographic quadrangle; lat. 41 degrees 26 minutes 42 seconds N. and long. 88 degrees 11 minutes 41 seconds W., NAD 27; UTM Zone 16, 400202E and 4588865N, NAD 83:

- Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium granular structure; friable; common very fine roots; common distinct dark grayish brown (10YR 4/2) silt coatings on horizontal faces of peds; neutral; gradual wavy boundary.
- BE—7 to 10 inches; brown (10YR 4/3) silt loam; weak thin platy structure; friable; common fine roots; common distinct dark grayish brown (10YR 4/2) silt coatings on horizontal faces of peds; neutral; gradual wavy boundary.
- Bt1—10 to 16 inches; brown (7.5YR 4/3) silt loam; moderate fine and medium prismatic structure; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; neutral; gradual wavy boundary.
- 2Bt2—16 to 24 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; common very fine roots; many prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; few fine strong brown (7.5YR 5/6) weakly cemented iron and manganese oxide nodules throughout; 1 percent gravel; neutral; clear smooth boundary.
- 2Bt3—24 to 30 inches; brown (7.5YR 4/3) clay loam; weak medium subangular blocky structure; firm; common fine roots; many prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; common medium brownish yellow (10YR 6/6) and distinct strong brown (7.5YR 4/6) weakly cemented iron and manganese oxide nodules throughout; 7 percent gravel; very slightly effervescent; slightly alkaline; clear smooth boundary.
- 3C—30 to 60 inches; yellowish brown (10YR 5/4) gravelly loamy sand; single grain; loose; 21 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 20 inches Depth to sandy and gravelly deposits: 24 to 40 inches

Depth to carbonates: 24 to 40 inches

Depth to the base of soil development: 24 to 40 inches

Ap or A horizon:

Hue—10YR Value—2 or 3 Chroma—2 or 3

Texture—silt loam or loam

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam or loam

Bt and 2Bt horizons (upper part):

Hue—10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay loam, clay loam, or loam

Content of gravel—less than 10 percent

Bt, BC, 2Bt, and/or 2BC horizons (lower part):

Hue—7.5YR or 10YR

Value-3 or 4

Chroma-2 or 3

Texture—sandy loam, clay loam, loam, or sandy clay loam or the gravelly or very gravelly analogs of these textures

Content of gravel—less than 45 percent

2C or 3C horizon:

Hue-7.5YR or 10YR

Value—4 to 7

Chroma—2 to 6

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand

Content of gravel—20 to 75 percent

325B—Dresden silt loam, 2 to 4 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and backslopes

Map Unit Composition

Dresden and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- · Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have sandy and gravelly deposits at a depth of less than 24 inches or more than 40 inches
- Soils that have slopes of less than 2 percent or more than 4 percent
- · Soils that have a thicker surface layer

Dissimilar soils:

· Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Dresden Soil

Parent material: Loess and/or loamy outwash over sandy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

325C2—Dresden silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Shoulders and backslopes

Map Unit Composition

Dresden and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that are severely eroded
- · Soils that have a thicker surface layer
- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have sandy and gravelly deposits at a depth of less than 24 inches or more than 40 inches
- Soils that have slopes of less than 4 percent or more than 6 percent *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Dresden Soil

Parent material: Loess and/or loamy outwash over sandy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None

Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Drummer Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Drummer silty clay loam, 0 to 2 percent slopes; at an elevation of 715 feet; 300 feet north and 1,600 feet east of the southwest corner of sec. 19, T. 19 N., R. 9 E.; Champaign County, Illinois; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 04 seconds N. and long. 88 degrees 13 minutes 58 seconds W.; UTM Zone 16, 394896E and 4437648N, NAD 27:

- Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; firm; many fine roots; moderately acid; clear smooth boundary.
- A—7 to 14 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure parting to weak fine granular; firm; many fine and medium roots; slightly acid; clear smooth boundary.
- BA—14 to 19 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; firm; many fine and medium roots; few fine faint very dark grayish brown (2.5Y 3/2) masses of manganese accumulation in the matrix; slightly acid; gradual smooth boundary.
- Bg—19 to 25 inches; dark gray (10YR 4/1) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; firm; many fine roots; common fine distinct and prominent yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation in the matrix; many wormholes; neutral; gradual smooth boundary.
- Btg1—25 to 32 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine and medium prismatic structure parting to moderate fine angular blocky; firm; many fine roots; common distinct dark gray (N 4/) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- Btg2—32 to 41 inches; gray (N 5/) silty clay loam; weak medium prismatic structure parting to weak medium angular blocky; firm; few fine roots; few distinct dark gray (N 4/) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; clear wavy boundary.
- 2Btg3—41 to 47 inches; gray (N 5/) loam; weak coarse subangular blocky structure; friable; few fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent gravel; neutral; abrupt wavy boundary.
- 2Cg—47 to 60 inches; dark gray (10YR 4/1), stratified loam and sandy loam; massive; friable; many medium prominent olive brown (2.5Y 4/4) masses of iron

accumulation in the matrix; many medium distinct gray (N 5/) iron depletions in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 65 inches

Ap or A horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 or 3

Chroma—0 to 2

Texture—silty clay loam; less commonly silt loam

Btg, Bg, and/or BA horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value-3 to 6

Chroma—0 to 4

Texture—silty clay loam or silt loam

2Btg horizon:

Hue—10YR, 7.5YR, 2.5Y, 5Y, or N

Value-4 to 6

Chroma—0 to 2

Texture—loam or silt loam with strata of clay loam, silty clay loam, sandy clay

loam, or sandy loam

Content of gravel—less than 7 percent

2Cg horizon:

Hue-10YR, 7.5YR, 2.5Y, 5Y, or N

Value—4 to 7

Chroma-0 to 8

Texture—stratified loam, silt loam, clay loam, or sandy loam with thin strata of

loamy sand

Content of gravel—less than 15 percent

152A—Drummer silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Drummer and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- · Soils that are underlain by till
- Soils that have carbonates within a depth of 40 inches

Dissimilar soils:

• The somewhat poorly drained Brenton and Elburn soils on summits and footslopes

- · Soils that are subject to flooding
- The poorly drained Harpster soils on toeslopes
- The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Drummer Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Du Page Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Du Page silt loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 593 feet; 1,160 feet east and 1,820 feet south of the northwest corner of sec. 36, T. 20 N., R. 4 E.; Whiteside County, Illinois; USGS Prophetstown topographic quadrangle; lat. 41 degrees 40 minutes 47 seconds N. and long. 89 degrees 59 minutes 35 seconds W., NAD 27; UTM Zone 16, 250860E and 4618550N, NAD 83:

- Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; few snail-shell fragments; strongly effervescent; slightly alkaline; abrupt smooth boundary.
- A1—9 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; few snail-shell fragments; strongly effervescent; slightly alkaline; clear smooth boundary.
- A2—17 to 27 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate medium and fine subangular blocky structure; friable; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few snailshell fragments; violently effervescent; slightly alkaline; clear smooth boundary.
- A3—27 to 34 inches; dark brown (10YR 3/3) loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure; friable; few faint very dark

grayish brown (10YR 3/2) organic coatings on faces of peds; few very dark gray (10YR 3/1) wormcasts; few snail-shell fragments; violently effervescent; moderately alkaline; clear smooth boundary.

C—34 to 60 inches; dark grayish brown (10YR 4/2) loam; thin strata of brown (10YR 5/3) sandy loam; massive; friable; few very dark grayish brown (10YR 3/2) wormcasts; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; few snail-shell fragments; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches Depth to the base of soil development: 24 to 50 inches

Ap or A horizon (upper part):

Hue-10YR

Value—2 or 3

Chroma—1 to 3

Texture—loam or silt loam

Content of gravel—less than 5 percent

A, Bw, or AC horizon (middle part):

Hue-10YR

Value—2 or 3

Chroma—2 or 3

Texture—loam, sandy loam, or sandy clay loam or the gravelly analogs of these textures

Content of gravel—less than 25 percent

C horizon:

Hue-10YR

Value-3 or 4

Chroma—1 to 4

Texture—loam, silt loam, sandy loam, or sandy clay loam or the gravelly analogs of these textures

Content of gravel—less than 25 percent

3321A—Du Page silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Du Page and similar soils: 85 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that are overlain by light-colored, recent deposits
- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have carbonates at a depth of more than 10 inches
- Soils that have a thinner subsurface layer
- Soils that have a seasonal high water table at a depth of less than 4 feet

Dissimilar soils:

• The poorly drained, calcareous Millington soils on flood plains

Properties and Qualities of the Du Page Soil

Parent material: Alluvium Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None

Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where protected from flooding or not

frequently flooded during the growing season

Hydric soil status: Not hydric

Elburn Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Elburn silt loam, 0 to 2 percent slopes; at an elevation of 617 feet; 2,716 feet north and 1,300 feet west of the southeast corner of sec. 36, T. 14 N., R. 1 E.; Christian County, Illinois; USGS Assumption topographic quadrangle; lat. 39 degrees 37 minutes 04.7 seconds N. and long. 89 degrees 01 minute 45.8 seconds W., NAD 27; UTM Zone 16, 325796E and 4387328N, NAD 83:

- Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; few very fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.
- A—6 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few very fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
- Bt1—16 to 21 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; many distinct very dark gray (10YR 3/1) organo-clay films and dark gray (10YR 4/1) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; few fine faint brown (10YR 5/3) soft masses of iron and manganese in the matrix; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

Bt2—21 to 28 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organo-clay films and common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; few fine faint grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

- Bt3—28 to 36 inches; brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organo-clay films and dark gray (10YR 4/1) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bt4—36 to 43 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; few prominent very dark gray (10YR 3/1) organo-clay films and few distinct brown (10YR 5/3) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; common medium distinct yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.
- Btg—43 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct very dark gray (10YR 3/1) organo-clay films and dark grayish brown (10YR 4/2) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; many medium prominent brownish yellow (10YR 6/8) and few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.
- 2BCtg—49 to 58 inches; grayish brown (2.5Y 5/2), stratified silt loam, loam, and sandy loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films and dark grayish brown (10YR 4/2) clay films lining pores; few very fine iron and manganese oxide concretions throughout; common medium prominent brownish yellow (10YR 6/8) and few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.
- 2Cg—58 to 62 inches; grayish brown (2.5Y 5/2), stratified sandy loam and loamy sand; massive; very friable; common medium prominent yellowish brown (10YR 5/8) and brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 19 inches

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 70 inches

Ap or A horizon:

Hue—10YR Value—2 or 3 Chroma—1 or 2

Texture—silt loam

Bt or Btg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—2 to 4

Texture—silty clay loam or silt loam

2Btg, 2Bt, 2BC, 2BCtg, or 2BCg horizon:

Hue—7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma-2 to 8

Texture—sandy loam, clay loam, loam, silty clay loam, or silt loam

Content of gravel—less than 15 percent

2C or 2Cg horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma-2 to 8

Texture—stratified sandy loam, loam, loamy sand, sand, or silt loam

Content of gravel—less than 15 percent

198A—Elburn silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and footslopes

Map Unit Composition

Elburn and similar soils: 93 percent

Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay within a depth of 40 inches
- Soils that have less sand and more silt in the lower part of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The well drained Plano and Batavia soils on summits
- The poorly drained Drummer and Thorp soils on toeslopes

Properties and Qualities of the Elburn Soil

Parent material: Loess over stratified loamy outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Elkhart Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Elkhart silt loam, 2 to 5 percent slopes; at an elevation of 745 feet; 540 feet south and 114 feet west of the northeast corner of sec. 19, T. 28 N., R. 1 W.; Woodford County, Illinois; USGS Washburn topographic quadrangle; lat. 40 degrees 52 minutes 47 seconds N. and long. 89 degrees 15 minutes 24 seconds W.; UTM Zone 16, 309860E and 4527842N, NAD 83:

- Ap—0 to 9 inches; black (10YR 2/1) silt loam, very dark grayish brown (10YR 3/2) dry: moderate medium granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.
- A—9 to 13 inches; very dark brown (10YR 2/2) silty clay loam, very dark grayish brown (10YR 3/2) dry; moderate medium granular structure; very friable; few very fine roots; neutral; clear smooth boundary.
- Bt1—13 to 22 inches; dark yellowish brown (10YR 3/4) silty clay loam; moderate fine and medium prismatic structure parting to moderate fine subangular blocky; friable; few very fine roots; common distinct black (10YR 2/1) organic coatings on faces of peds; neutral; gradual wavy boundary.
- Bt2—22 to 37 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure; friable; few very fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; few fine faint light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- Bt3—37 to 52 inches; yellowish brown (10YR 5/6) silt loam; weak coarse prismatic structure; friable; few very fine roots; few distinct brown (10YR 5/3) clay films on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; strongly effervescent; slightly alkaline; diffuse wavy boundary.
- C—52 to 60 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; few fine distinct yellowish brown (10YR 5/8) masses of iron accumulation and common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to carbonates: 20 to 40 inches

Ap, A, or AB horizon:

Hue—10YR or 7.5YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

BA and/or Bt horizon:

Hue-10YR or 7.5YR

Value—3 to 5

Chroma-3 to 6

Texture—silty clay loam or silt loam

BC or BCk horizon:

Hue-10YR, 7.5YR, or 2.5Y

Value—4 to 6

Chroma—3 to 6

Texture—silt loam or silty clay loam

C horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6 Chroma—1 to 6 Texture—silt loam

567B—Elkhart silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits and backslopes

Map Unit Composition

Elkhart and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less silt in the profile
- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 4 feet Dissimilar soils:
- The somewhat poorly drained Arrowsmith soils on summits and footslopes

Properties and Qualities of the Elkhart Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Elliott Series

Taxonomic classification: Fine, illitic, mesic Aquic Argiudolls

Taxadjunct features: The Elliott soil in map unit 146B2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine, illitic, mesic Aquollic Hapludalf.

Typical Pedon

Elliott silt loam, 0 to 2 percent slopes; at an elevation of 704 feet; 690 feet south and 2,436 feet west of the center of sec. 21, T. 29 N., R. 8 E.; Livingston County, Illinois; USGS Cullom topographic quadrangle; lat. 40 degrees 58 minutes 12 seconds N. and long. 88 degrees 19 minutes 19 seconds W., NAD 27; UTM Zone 16, 388762E and 4536262N, NAD 83:

- Ap—0 to 6 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.
- A—6 to 11 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; common fine roots; slightly acid; clear smooth boundary.
- Bt1—11 to 16 inches; light olive brown (2.5Y 5/4) silty clay; moderate fine subangular blocky structure; friable; common fine roots; few distinct black (10YR 2/1) organic coatings on faces of peds; many distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; neutral; clear smooth boundary.
- 2Bt2—16 to 23 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few fine roots; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; 1 percent gravel; neutral; clear smooth boundary.
- 2Bt3—23 to 28 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few fine roots; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; neutral; clear smooth boundary.
- 2Bt4—28 to 35 inches; olive brown (2.5Y 4/4) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; firm; few fine roots; many distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; few medium white (10YR 8/1) moderately cemented calcium carbonate concretions throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2Bt5—35 to 41 inches; olive brown (2.5Y 4/4) silty clay loam; weak fine prismatic structure parting to moderate medium angular blocky; firm; few fine roots; common distinct gray (5Y 6/1) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; strongly effervescent; slightly alkaline; clear smooth boundary.
- 2Cd—41 to 60 inches; olive brown (2.5Y 4/4) silty clay loam; massive; firm; common fine prominent gray (5Y 5/1) iron depletions in the matrix; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 20 inches

Depth to carbonates: 17 to 40 inches

Depth to the base of soil development: 20 to 45 inches

Ap or A horizon:

Hue-10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam or silty clay loam

Bt or 2Bt horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma-2 to 4

Texture—silty clay loam or silty clay

Content of gravel—less than 10 percent

2Cd horizon:

Hue-10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 to 6

Texture—silty clay loam

Content of gravel—less than 15 percent

146A—Elliott silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Summits and footslopes

Map Unit Composition

Elliott and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have more than 20 inches of loess or other silty material
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Elliott Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 8.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet, January through May

Ponding: None

Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

146B—Elliott silt loam, 2 to 4 percent slopes

Settina

Landform: End moraines and ground moraines
Position on the landform: Backslopes and footslopes

Map Unit Composition

Elliott and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have more than 20 inches of loess or other silty material
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are moderately eroded

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Elliott Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 8.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

146B2—Elliott silty clay loam, 2 to 4 percent slopes, eroded

Setting

Landform: End moraines and ground moraines
Position on the landform: Backslopes and footslopes

Map Unit Composition

Elliott and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have more than 20 inches of loess or other silty material
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are severely eroded or only slightly eroded

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Elliott Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 6.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Elpaso Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Elpaso silty clay loam, 0 to 2 percent slopes; at an elevation of 715 feet; 210 feet north and 320 feet west of the southeast corner of sec. 30, T. 27 N., R. 2 E.; Woodford County, Illinois; USGS Benson topographic quadrangle; lat. 40 degrees 45 minutes 59.7 seconds N. and long. 89 degrees 01 minute 34 seconds W., NAD 27; UTM Zone 16, 328989E and 4514825N, NAD 83:

- Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak very fine granular structure; firm; many very fine and fine roots; moderately acid; abrupt smooth boundary.
- A—7 to 21 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium subangular blocky structure; firm; many very fine and fine roots; moderately acid; gradual wavy boundary.
- Bg—21 to 35 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; many fine roots; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- Btg1—35 to 44 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) and few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- 2Btg2—44 to 53 inches; dark grayish brown (2.5Y 4/2) silt loam; weak medium and coarse subangular blocky structure; friable; few fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) and common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; 5 percent gravel; slightly alkaline; clear wavy boundary.
- 2Btg3—53 to 69 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) silty clay loam; weak medium and coarse prismatic structure; firm; few distinct dark gray (10YR 4/1) clay films on faces of peds; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct olive gray (5Y 5/2) iron depletions throughout; 4 percent gravel; slightly effervescent starting at a depth of 63 inches; slightly alkaline; diffuse wavy boundary.
- 2C—69 to 80 inches; olive brown (2.5Y 4/4) silty clay loam; massive; firm; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine prominent olive gray (5Y 5/2) iron depletions throughout; 4 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches Thickness of the loess or other silty material: 40 to 60 inches Depth to carbonates: 35 to 65 inches

Depth to the base of soil development: 45 to 75 inches

Ap and A horizons:

Hue—10YR, 2.5Y, or N

Value—2 or 3

Chroma—0 to 2

Texture—silty clay loam

Bg and Btg horizons:

Hue-10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam or silt loam

2Btg and/or 2BCg horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value-4 to 6

Chroma-0 to 4

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—1 to 10 percent

2C horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 8

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—1 to 10 percent

356A—Elpaso silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Toeslopes

Map Unit Composition

Elpaso and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have carbonates at a depth of less than 35 inches
- Soils that have till at a depth of less than 40 inches or more than 60 inches
- Soils that are overlain by light-colored, recent deposits
- Soils that have more clay and less silt in the control section
- Soils that have carbonates within a depth of 35 inches

Dissimilar soils:

- The somewhat poorly drained Chenoa and Flanagan soils on summits and footslopes
- The poorly drained Harpster soils on toeslopes

Properties and Qualities of the Elpaso Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 13.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Faxon Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Faxon loam, 0 to 2 percent slopes; at an elevation of 503 feet; 1,150 feet south and 1,300 feet east of the northwest corner of sec. 26, T. 33 N., R. 5 E.; La Salle County, Illinois; lat. 41 degrees 18 minutes 28 seconds N. and long. 88 degrees 37 minutes 28 seconds W.; UTM Zone 16, 364016E and 4574212N, NAD 83:

- Ap—0 to 5 inches; very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; weak medium subangular blocky structure parting to weak medium granular; friable; common very fine and fine roots; slightly acid; clear smooth boundary.
- A—5 to 12 inches; very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots and few medium roots; slightly acid; clear smooth boundary.
- Bg—12 to 16 inches; dark gray (10YR 4/1) loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots and few medium roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg1—16 to 23 inches; gray (2.5Y 5/1) clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine and medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; strongly acid; clear wavy boundary.
- Btg2—23 to 28 inches; gray (2.5Y 5/1) loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; few very fine, fine, and medium roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds and in pores; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; strongly acid; clear wavy boundary.
- BCg—28 to 36 inches; gray (2.5Y 5/1) loam; weak medium and coarse subangular blocky structure; friable; few very fine roots; very few distinct dark gray (2.5Y 4/1) clay films in root channels and/or pores; many medium and coarse prominent

yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 3 percent channers; strongly acid; clear wavy boundary.

2R—36 inches; gray (2.5Y 5/1) sandstone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Depth to bedrock: 20 to 40 inches

Depth to the base of soil development: 20 to 40 inches

Ap or A horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—2 or 3 Chroma—0 or 1

Texture—loam, silt loam, clay loam, sandy clay loam, or silty clay loam

Bg, Btg, or BCg horizon:

Hue—10YR, 2.5Y, 5Y, or 5GY

Value—4 or 5

Chroma—1 or 2 in the upper part; 1 to 4 in the lower part

Texture—loam, silt loam, clay loam, sandy clay loam, or silty clay loam or the gravelly or channery analogs of these textures

Content of gravel—less than 10 percent; as much as 35 percent in the horizon adjacent to the bedrock in some pedons

516A—Faxon loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Toeslopes

Map Unit Composition

Faxon and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more silt throughout the profile
- Soils that have a thinner surface layer
- Soils that have a lighter colored surface layer
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches *Dissimilar soils:*
- The well drained Hesch and Channahon soils on summits and footslopes
- Somewhat poorly drained soils on summits and footslopes
- Soils that are subject to flooding
- The very poorly drained Peotone soils on toeslopes

Properties and Qualities of the Faxon Soil

Parent material: Drift over sandstone Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)

Available water capacity: About 6.8 inches to a depth of 60 inches

Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Low

Depth and months of the highest perched seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

8516A—Faxon loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Faxon and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches
- Soils that have less sand and more silt throughout the profile
- Soils that have a thinner surface layer
- Soils that have a lighter colored surface layer

Dissimilar soils:

- · Soils that are not subject to flooding
- The poorly drained Titus soils on flood plains

Properties and Qualities of the Faxon Soil

Parent material: Drift over sandstone Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: 20 to 40 inches to bedrock (lithic) Available water capacity: About 6.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Negligible

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Fayette Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Fayette silt loam, 5 to 10 percent slopes, eroded; at an elevation of 645 feet; 1,640 feet north and 1,800 feet west of the southeast corner of sec. 35, T. 3 N., R. 2 E.; Fulton County, Illinois; USGS Bath topographic quadrangle; lat. 40 degrees 11 minutes 23 seconds N. and long. 90 degrees 14 minutes 52 seconds W.; UTM Zone 16, 734279E and 4452430N, NAD 83:

- Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, brown (10YR 4/3) dry; weak very fine subangular blocky structure parting to weak very fine and fine granular; friable; common very fine roots; slightly acid; clear smooth boundary.
- Bt1—8 to 11 inches; yellowish brown (10YR 5/4) silty clay loam; moderate very fine subangular blocky structure; firm; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine very weakly cemented iron-manganese oxide concretions throughout; moderately acid; clear smooth boundary.
- Bt2—11 to 24 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine very weakly cemented iron-manganese oxide concretions throughout; strongly acid; gradual smooth boundary.
- Bt3—24 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine very weakly cemented iron-manganese oxide concretions throughout; strongly acid; gradual smooth boundary.
- Bt4—38 to 49 inches; yellowish brown (10YR 5/4) silty clay loam; moderate coarse subangular blocky structure; firm; few very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine very weakly cemented iron-manganese oxide concretions throughout; strongly acid; gradual smooth boundary.
- BC—49 to 64 inches; yellowish brown (10YR 5/4) silty clay loam; firm; very few distinct brown (10YR 4/3) clay films on faces of peds; few fine very weakly cemented iron-manganese oxide concretions throughout; strongly acid; gradual smooth boundary.
- C—64 to 80 inches; yellowish brown (10YR 5/4) silt loam; friable; few fine very weakly cemented iron-manganese oxide concretions throughout; strongly acid.

Range in Characteristics

Thickness of the loess: More than 60 inches Depth to carbonates: More than 40 inches

A horizon:

Hue—10YR Value—2 or 3

Chroma—1 or 2 Texture—silt loam

Ap horizon (where present):

Hue-10YR

Value-4

Chroma—2 or 3

Texture—silt loam

E horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—1 to 4

Texture—silt loam

BE horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silty clay loam

Bt horizon:

Hue-10YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam

BC and/or C horizon:

Hue—10YR

Value—4 or 5

Chroma-4 to 6

Texture—silt loam or silty clay loam

280C2—Fayette silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Fayette and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have till within a depth of 60 inches
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are severely eroded or only slightly eroded

Dissimilar soils:

The somewhat poorly drained Stronghurst soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Flanagan Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Typical Pedon

Flanagan silt loam, 0 to 2 percent slopes; at an elevation of 730 feet; 1,607 feet east and 1,405 feet north of the southwest corner of sec. 19, T. 19 N., R. 9 E.; Champaign County, Illinois; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 14 seconds N. and long. 88 degrees 13 minutes 57 seconds W., NAD 27; UTM Zone 16, 394922E and 4438169N, NAD 83:

- A1—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; slightly alkaline; gradual smooth boundary.
- A2—8 to 15 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.
- A3—15 to 18 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.
- Bt1—18 to 23 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint brown (10YR 4/3) masses of iron and manganese oxide accumulation in the matrix; moderately acid; clear smooth boundary.
- Bt2—23 to 32 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint brown (10YR 5/3 and 4/3) masses of iron and manganese oxide accumulation in the matrix; moderately acid; clear smooth boundary.
- Bt3—32 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint light yellowish brown (10YR 6/4) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

Bt4—38 to 45 inches; 40 percent yellowish brown (10YR 5/6), 30 percent light brownish gray (10YR 6/2), and 30 percent brown (10YR 5/3) silt loam; weak medium subangular blocky structure; friable; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; slightly acid; gradual smooth boundary.

2Bt5—45 to 49 inches; 35 percent yellowish brown (10YR 5/4), 35 percent light olive brown (2.5Y 5/4), and 30 percent light brownish gray (10YR 6/2) silt loam; weak coarse subangular blocky structure; firm; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; 5 percent gravel; neutral; abrupt smooth boundary.

2C—49 to 60 inches; yellowish brown (10YR 5/4) loam; massive; firm; common medium white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 5 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: 45 to 65 inches

Depth to the base of soil development: 45 to 65 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam

Bt horizon:

Hue-10YR or 2.5Y

Value-4 to 6

Chroma-2 to 6

Texture—silty clay loam, silty clay, or silt loam

2Bt, 2Btg, 2BCg, or 2BC horizon:

Hue—7.5YR to 2.5Y

Value—4 to 6

Chroma—1 to 6

Texture—loam, silt loam, clay loam, or silty clay loam

Content of gravel—1 to 14 percent

2C horizon:

Hue-7.5YR to 5Y

Value—4 to 6

Chroma—2 to 6

Texture—loam, clay loam, silty clay loam, or silt loam

Content of gravel—1 to 14 percent

154A—Flanagan silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Flanagan and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less sand in the middle and lower parts of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent
- Soils that have till within a depth of 40 inches

Dissimilar soils:

• The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Flanagan Soil

Parent material: Loess over till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

818A—Flanagan-Catlin silt loams, 0 to 3 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Flanagan—summits and footslopes in areas where slopes are generally less than 2 percent; Catlin—knolls and summits in areas where slopes are generally more than 1 percent

Map Unit Composition

Flanagan and similar soils: 55 percent Catlin and similar soils: 35 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches or more than 60 inches deep to till
- Soils that have a thinner surface layer
- Soils that have slopes of more than 3 percent
- Soils that have more clay and less sand in the middle and lower parts of the profile

Dissimilar soils:

· The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Flanagan Soil

Parent material: Loess over loamy till Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Flanagan—1; Catlin—1

Prime farmland category: Prime farmland

Hydric soil status: Flanagan—not hydric; Catlin—not hydric

Fox Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Fox silt loam, 2 to 4 percent slopes; at an elevation of 602 feet; 760 feet north and 2,120 feet east of the southwest corner of sec. 21, T. 36 N., R. 9 E.; Will County, Illinois;

USGS Plainfield topographic quadrangle; lat. 41 degrees 34 minutes 56 seconds N. and long. 88 degrees 12 minutes 43 seconds W., NAD 27; UTM Zone 16, 398970E and 4604104N, NAD 83:

- Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; common fine roots; neutral; clear smooth boundary.
- BE—4 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak thick platy structure parting to weak fine subangular blocky; friable; common very fine and fine roots; few prominent light brownish gray (10YR 6/2) (dry) silt coatings on horizontal faces of peds; neutral; gradual smooth boundary.
- Bt1—7 to 13 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; common faint brown (10YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.
- 2Bt2—13 to 24 inches; brown (7.5YR 4/3) clay loam; moderate medium and coarse subangular blocky structure; firm; common fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; common fine yellowish brown (10YR 5/6) weakly cemented iron and manganese oxide concretions throughout; 7 percent gravel; very slightly effervescent; slightly alkaline; gradual wavy boundary.
- 2BC—24 to 28 inches; dark yellowish brown (10YR 4/4) gravelly loam; weak medium and coarse subangular blocky structure; firm; few distinct brown (10YR 4/3) clay films on vertical faces of peds; common fine yellowish brown (10YR 5/8) weakly cemented iron and manganese oxide concretions throughout; 15 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.
- 3C—28 to 60 inches; 80 percent brownish yellow (10YR 6/6) and 20 percent yellowish brown (10YR 5/4) gravelly coarse sand; single grain; loose; 20 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 24 inches Depth to sandy and gravelly deposits: 20 to 40 inches Depth to carbonates: 20 to 40 inches Depth to the base of soil development: 20 to 40 inches

Ap or A horizon:

Hue—7.5YR or 10YR Value—2 to 4 Chroma—1 to 3 Texture—silt loam or loam

E horizon (where present):

Hue—10YR Value—4 or 5 Chroma—2 or 3 Texture—silt loam or loam

Bt horizon:

Hue—7.5YR or 10YR Value—3 to 5 Chroma—4 Texture—silty clay loam or silt loam

2Bt horizon:

Hue—5YR, 7.5YR, or 10YR Value—3 or 4 Chroma—3 or 4

Texture—clay loam, loam, sandy clay loam, or sandy loam or the gravelly analogs of these textures

Content of gravel—less than 35 percent

3C horizon:

Hue—7.5YR or 10YR

Value—4 to 7 Chroma—3 or 4

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand or

coarse sand

Content of gravel—15 to 70 percent

327B—Fox silt loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Backslopes and summits

Map Unit Composition

Fox and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker and darker surface layer
- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have sandy and gravelly deposits at a depth of less than 24 inches or more than 40 inches
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that are moderately eroded

Dissimilar soils:

Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Fox Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland Hydric soil status: Not hydric

327C2—Fox silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Backslopes and shoulders

Map Unit Composition

Fox and similar soils: 92 percent Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have sandy and gravelly deposits at a depth of less than 24 inches or more than 40 inches
- Soils that have slopes of less than 4 percent or more than 6 percent
- Soils that are severely eroded

Dissimilar soils:

· Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Fox Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

327D2—Fox loam, 6 to 12 percent slopes, eroded

Setting

Landform: Kames, end moraines, and outwash plains Position on the landform: Shoulders and backslopes

Map Unit Composition

Fox and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

• Soils that have less sand and more clay in the upper one-half of the profile

- Soils that have sandy and gravelly deposits at a depth of less than 24 inches or more than 40 inches
- Soils that are severely eroded
- Soils that have slopes of less than 6 percent or more than 12 percent Dissimilar soils:
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Fox Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Frankfort Series

Taxonomic classification: Fine, illitic, mesic Udollic Epiaqualfs

Typical Pedon

Frankfort silt loam, 2 to 4 percent slopes; at an elevation of 675 feet; 2,300 feet south and 300 feet east of the northwest corner of sec. 26, T. 44 N., R. 11 E.; Lake County, Illinois; USGS Libertyville topographic quadrangle; lat. 42 degrees 15 minutes 46 seconds N. and long. 87 degrees 55 minutes 25 seconds W., NAD 27; UTM Zone 16, 423811E and 4679374N, NAD 83:

- A—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many very fine and fine roots; neutral; abrupt smooth boundary.
- EB—8 to 12 inches; dark grayish brown (10YR 4/2) silty clay loam, light brownish gray (10YR 6/2) dry; weak thick platy structure parting to weak fine subangular blocky;

- friable; common very fine and fine roots; many prominent very dark gray (10YR 3/1) organic coatings on faces of peds and in pores; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bt—12 to 18 inches; brown (10YR 4/3) silty clay; moderate fine and medium subangular blocky structure; friable; common very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on surfaces along pores; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; common fine and medium strong brown (7.5YR 5/6) weakly cemented iron oxide concretions throughout; few fine black (7.5YR 2.5/1) strongly cemented manganese oxide concretions throughout; common fine and medium distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.
- Btg1—18 to 24 inches; dark grayish brown (10YR 4/2) silty clay; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on surfaces along pores; many distinct dark gray (10YR 4/1) clay films on faces of peds and in pores; common medium strong brown (7.5YR 5/6) weakly cemented iron oxide concretions throughout; few fine black (7.5YR 2.5/1) strongly cemented manganese oxide concretions throughout; common fine and medium distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; 1 percent gravel; neutral; gradual wavy boundary.
- Btg2—24 to 32 inches; grayish brown (10YR 5/2) silty clay; moderate medium and coarse prismatic structure parting to weak medium and coarse subangular blocky; firm; common prominent very dark brown (10YR 2/2) organo-clay films on faces of peds and in pores; common fine and medium reddish yellow (7.5YR 6/8) weakly cemented iron oxide concretions throughout; common fine black (7.5YR 2.5/1) strongly cemented manganese oxide concretions throughout; few fine prominent reddish yellow (7.5YR 7/6) masses of iron accumulation in the matrix; many medium faint gray (2.5Y 6/1) iron depletions in the matrix; 2 percent gravel; neutral; clear wavy boundary.
- BCg—32 to 37 inches; 60 percent gray (10YR 6/1) and 40 percent brown (10YR 5/3) silty clay; weak coarse prismatic structure parting to weak coarse angular blocky; very firm; few distinct very dark gray (10YR 3/1) organic coatings on surfaces along pores; common fine dark yellowish brown (10YR 4/6) weakly cemented iron oxide concretions throughout; common medium distinct white (10YR 8/1) carbonate masses throughout; 2 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.
- Cdg—37 to 60 inches; 60 percent gray (2.5Y 5/1) and 40 percent dark yellowish brown (10YR 4/4) silty clay loam; massive; very firm; few prominent very dark gray (10YR 3/1) organic coatings on surfaces along pores; common medium brown (10YR 5/3) weakly cemented iron oxide concretions throughout; common coarse prominent white (10YR 8/1) carbonate masses throughout; 1 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 20 inches

Depth to carbonates: 18 to 40 inches

Depth to the base of soil development: 24 to 42 inches

Ap or A horizon:

Hue—10YR Value—2 or 3

Chroma—1 or 2

Texture—silt loam or silty clay loam

E or EB horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—1 or 2

Texture—silt loam or silty clay loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay or clay

Content of gravel—less than 7 percent

BC or BCg horizon (where present):

Hue—10YR

Value-4 to 6

Chroma—2 to 6

Texture—silty clay or clay

Content of gravel—less than 10 percent

Cdg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—2 to 6

Texture—silty clay, silty clay loam, or clay Content of gravel—less than 10 percent

320B—Frankfort silt loam, 2 to 4 percent slopes

Setting

Landform: End moraines and ground moraines

Position on the landform: Backslopes and footslopes

Map Unit Composition

Frankfort and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have less clay and more silt in the control section
- Soils that have a thicker surface layer
- Soils that have slopes of less than 2 percent or more than 4 percent *Dissimilar soils:*
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Frankfort Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 24 to 42 inches to dense material Available water capacity: About 6.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

320C2—Frankfort silty clay loam, 4 to 6 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Frankfort and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that have a thicker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- · Soils that are severely eroded or only slightly eroded
- Soils that have less clay and more silt in the control section

Dissimilar soils:

- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Frankfort Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 24 to 42 inches to dense material Available water capacity: About 5.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Gale Series

Taxonomic classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Gale silt loam, 2 to 4 percent slopes; at an elevation of 562 feet; 1,285 feet north and 975 feet west of the southeast corner of sec. 17, T. 33 N., R. 4 E.; La Salle County, Illinois; lat. 41 degrees 19 minutes 43 seconds N. and long. 88 degrees 47 minutes 08 seconds W.; UTM Zone 16, 350575E and 4576772N, NAD 83:

- Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; common very fine roots; moderately acid; abrupt smooth boundary.
- E—4 to 7 inches; brown (10YR 4/3) silt loam; moderate thin platy structure; friable; common very fine roots; few distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; very strongly acid; clear smooth boundary.
- Bt1—7 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; weak very fine and fine subangular blocky structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds; very strongly acid; clear smooth boundary.
- Bt2—13 to 20 inches; yellowish brown (10YR 5/6) silt loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.
- Bt3—20 to 30 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine and medium subangular blocky structure; firm; common very fine and fine roots; common distinct strong brown (7.5YR 4/6) clay films on faces of peds; very strongly acid; gradual wavy boundary.
- 2Bt4—30 to 34 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; common very fine and fine roots; few distinct yellowish brown (10YR 5/4) clay films on faces of peds; 3 percent channers; very strongly acid; gradual wavy boundary.
- 2C—34 to 37 inches; yellowish brown (10YR 5/4) loamy fine sand; single grain; very friable; few very fine roots; 6 percent channers; very strongly acid; clear wavy boundary.
- 2Cr—37 inches; yellowish brown (10YR 5/4) sandstone bedrock.

Range in Characteristics

Thickness of the loess or other silty material: 15 to 39 inches Depth to bedrock: 20 to 40 inches

Ap or A horizon: Hue—10YR Value-2 to 4

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam

Bt horizon:

Hue-7.5YR or 10YR

Value-3 to 5

Chroma—4 to 6

Texture—silt loam or silty clay loam

2Bt horizon:

Hue—7.5YR or 10YR

Value-4 to 6

Chroma—4 to 6

Texture—sandy loam, fine sandy loam, or loam or the channery analogs of these textures

Content of channers—less than 35 percent

2BC horizon (where present):

Hue-7.5YR or 10YR

Value—4 to 7

Chroma-3 to 8

Texture—loamy sand, loamy fine sand, sand, or fine sand or the channery analogs of these textures

Content of channers—less than 35 percent

2C horizon:

Hue—7.5YR or 10YR

Value—4 to 7

Chroma—3 to 8

Texture—sand, fine sand, or loamy fine sand or the channery analogs of these textures

Content of channers—less than 35 percent

2Cr horizon:

Hue-7.5YR or 10YR

Value—4 to 7

Chroma-3 to 8

413B—Gale silt loam, 2 to 4 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Backslopes and summits

Map Unit Composition

Gale and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that do not have contrasting layers
- Soils that are more than 39 inches deep to residuum
- Soils that do not have bedrock
- Soils that have slopes of less than 2 percent or more than 4 percent *Dissimilar soils:*
- · Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Gale Soil

Parent material: Loess over siliceous sandy residuum over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 6.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

413C2—Gale silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Backslopes and shoulders

Map Unit Composition

Gale and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that do not have contrasting layers
- Soils that are more than 39 inches deep to residuum
- Soils that do not have bedrock
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that are severely eroded or only slightly eroded

Dissimilar soils:

Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Gale Soil

Parent material: Loess over siliceous sandy residuum over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 7.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Graymont Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls **Taxadjunct features:** The Graymont soils in map units 541B2 and 541C2 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs.

Typical Pedon

Graymont silt loam, 2 to 5 percent slopes; at an elevation of 704 feet; 2,100 feet north and 100 feet east of the southwest corner of sec. 28, T. 28 N., R. 3 E.; Livingston County, Illinois; USGS Flanagan SW topographic quadrangle; lat. 40 degrees 51 minutes 41 seconds N. and long. 88 degrees 53 minutes 30 seconds W., NAD 27; UTM Zone 16, 340565E and 4525111N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; few very fine roots; slightly acid; abrupt smooth boundary.
- AB—7 to 12 inches; very dark brown (10YR 2/2) silt loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; few very fine roots; slightly acid; clear smooth boundary.
- Bt1—12 to 19 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine angular blocky structure; friable; few very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
- Bt2—19 to 24 inches; yellowish brown (10YR 5/4 and 5/6) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.

Bt3—24 to 28 inches; yellowish brown (10YR 5/4 and 5/6) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.

- Bt4—28 to 33 inches; brown (10YR 5/3) silt loam; weak fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; few distinct grayish brown (10YR 5/2) clay films on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; neutral; clear smooth boundary.
- 2Btg—33 to 38 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine prismatic structure; firm; few very fine roots; few distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; 3 percent gravel; neutral; clear smooth boundary.
- 2Cg—38 to 60 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; firm; few fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; few fine white (10YR 8/1) calcium carbonate concretions throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; few fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 20 to 40 inches

Depth to carbonates: 24 to 40 inches

Depth to the base of soil development: 24 to 45 inches

Ap, A, or AB horizon:

Hue—10YR

Value-2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

Bt horizon:

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt, 2Btg, 2BC, or 2BCg horizon:

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—1 to 6

Texture—silty clay loam or silt loam

Content of gravel—1 to 14 percent

2Cg or 2C horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6
Texture—silty clay loam or silt loam
Content of gravel—2 to 14 percent

541B—Graymont silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Backslopes and summits

Map Unit Composition

Graymont and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less silt in the upper one-half of the profile
- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have more clay and less silt in the control section

Dissimilar soils:

• The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Graymont Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

541B2—Graymont silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines Position on the landform: Backslopes and summits

Map Unit Composition

Graymont and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less silt in the upper one-half of the profile
- · Soils that are slightly eroded
- Soils that have more clay and less silt in the control section
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Graymont Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

541C2—Graymont silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: End moraines and ground moraines Position on the landform: Backslopes and shoulders

Map Unit Composition

Graymont and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less silt in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- · Soils that are severely eroded
- Soils that have more clay and less silt in the control section

Dissimilar soils:

- The nearly level, somewhat poorly drained Chenoa soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Graymont Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Greenbush Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Greenbush silt loam, 2 to 5 percent slopes; at an elevation of 700 feet; 1,430 feet west and 1,400 feet north of the southeast corner of sec. 18, T. 8 N., R. 1 W.; Warren County, Illinois; USGS Greenbush topographic quadrangle; lat. 40 degrees 40 minutes 40 seconds N. and long. 90 degrees 32 minutes 47 seconds W., NAD 27; UTM Zone 15, 707351E and 4505886N, NAD 83:

Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; slightly acid; abrupt smooth boundary.

E—6 to 10 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure; friable; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; abrupt smooth boundary.

- BE—10 to 17 inches; brown (10YR 4/3) silt loam; moderate medium platy structure parting to weak fine subangular blocky; friable; few distinct very dark gray (10YR 3/1) organic coatings and common distinct gray (10YR 6/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
- Bt1—17 to 29 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium angular blocky; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct gray (10YR 6/1) (dry) silt coatings on faces of peds; strongly acid; gradual smooth boundary.
- Bt2—29 to 38 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium prominent gray (5Y 6/1) iron depletions within peds; common prominent black (7.5YR 2/) manganese oxide stains in the matrix; strongly acid; gradual wavy boundary.
- Bt3—38 to 53 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium prominent gray (5Y 6/1) iron depletions within peds; common prominent black (7.5YR 2/) manganese oxide stains in the matrix; strongly acid; gradual wavy boundary.
- BCt—53 to 75 inches; 60 percent brown (10YR 5/3) and 40 percent light olive gray (5Y 6/2) silt loam; weak medium and coarse prismatic structure parting to weak fine and medium angular blocky; friable; few faint brown (10YR 4/3) clay films on faces of peds; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common prominent black (7.5YR 2/) manganese oxide stains in the matrix; moderately acid; gradual wavy boundary.
- C—75 to 100 inches; 55 percent yellowish brown (10YR 5/4) and 45 percent light olive gray (5Y 6/2) silt loam; massive; friable; many medium distinct light brownish gray (10YR 6/2) iron depletions within peds; many prominent black (7.5YR 2/) manganese oxide stains in the matrix; moderately acid.

Range in Characteristics

Depth to carbonates: More than 60 inches

Depth to the base of the argillic horizon: 36 to 70 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam or silty clay loam

E or BE horizon:

Hue—10YR

Value—3 to 5

Chroma-2 or 3

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 or 5 Chroma—3 to 6 Texture—silty clay loam or silt loam

C horizon:

Hue—10YR, 2.5Y, or 5Y Value—4 to 6 Chroma—2 to 6 Texture—silt loam

675B—Greenbush silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Shoulders and summits

Map Unit Composition

Greenbush and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a lighter colored surface layer
- · Soils that have a thicker surface layer
- Soils that have carbonates within a depth of 40 inches
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 4 feet Dissimilar soils:
- The somewhat poorly drained Atterberry soils on summits
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

675C2—Greenbush silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Greenbush and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

Soils that have a lighter colored surface layer

- Soils that have carbonates within a depth of 40 inches
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have a seasonal high water table at a depth of less than 4 feet *Dissimilar soils:*
- The somewhat poorly drained Atterberry soils on summits

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Harpster Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Calciaquolls

Typical Pedon

Harpster silty clay loam, 0 to 2 percent slopes; at an elevation of 722 feet; 855 feet south and 70 feet west of the northeast corner of sec. 20, T. 23 N., R. 7 E.; Ford County, Illinois; USGS Gibson City West topographic quadrangle; lat. 40 degrees 26

minutes 24 seconds N. and long. 88 degrees 25 minutes 23 seconds W., NAD 27; UTM Zone 16, 379305E and 4477570N, NAD 83:

- Apk—0 to 9 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common very fine roots; many snail shells; strongly effervescent (20 percent calcium carbonate equivalent); moderately alkaline; abrupt smooth boundary.
- Ak—9 to 18 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak fine and medium granular structure; firm; common very fine roots; many snail shells; strongly effervescent (18 percent calcium carbonate equivalent); moderately alkaline; clear smooth boundary.
- Bg1—18 to 25 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak fine and medium angular blocky structure; firm; common very fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; few snail shells; slightly effervescent (7 percent calcium carbonate equivalent); moderately alkaline; gradual smooth boundary.
- Bg2—25 to 31 inches; dark gray (5Y 4/1) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium angular blocky; firm; few very fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine prominent dark yellowish brown (10YR 4/4) and few fine distinct olive (5Y 4/4) masses of iron accumulation in the matrix; few snail shells; slightly effervescent (5 percent calcium carbonate equivalent); slightly alkaline; gradual smooth boundary.
- Bg3—31 to 36 inches; dark gray (5Y 4/1) silty clay loam; weak coarse prismatic structure parting to weak medium angular blocky; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common medium distinct olive (5Y 4/4) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; slightly effervescent (2 percent calcium carbonate equivalent); slightly alkaline; gradual smooth boundary.
- Bg4—36 to 41 inches; 40 percent olive brown (2.5Y 4/4), 35 percent olive yellow (2.5Y 6/6), and 25 percent gray (5Y 5/1) silty clay loam; weak coarse angular blocky structure; firm; few very fine roots; 2 percent gravel; slightly effervescent (2 percent calcium carbonate equivalent); slightly alkaline; gradual smooth boundary.
- Cg1—41 to 56 inches; 55 percent gray (5Y 5/1), 40 percent light olive brown (2.5Y 5/6), and 5 percent dark yellowish brown (10YR 4/4) silt loam; massive; firm; 1 percent gravel; strongly effervescent (16 percent calcium carbonate equivalent); moderately alkaline; clear smooth boundary.
- Cg2—56 to 60 inches; gray (10YR 5/1) loam; massive; friable; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Thickness of the loess or other silty material: 36 to 60 inches

Depth to carbonates: Less than 16 inches

Depth to the base of soil development: 22 to 46 inches

Apk or Ak horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 or 3

Chroma-0 or 1

Texture—silty clay loam or silt loam

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value-3 to 6

Chroma—0 to 2

Texture—silty clay loam or silt loam; loam or clay loam included in the range in the lower part

Content of gravel—less than 3 percent

Cg or 2Cg horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 6 Chroma—1 to 8

Texture—silt loam or loam with strata of sandy loam or clay loam

Content of gravel—less than 7 percent

67A—Harpster silty clay loam, 0 to 2 percent slopes

Setting

Landform: Depressions, stream terraces, lake plains, ground moraines, and outwash

plains

Position on the landform: Toeslopes

Map Unit Composition

Harpster and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- Soils that have till in the lower part of the profile
- Soils that have a surface layer of silt loam
- Soils that have 6 to 12 inches of silty overwash
- Soils that do not have carbonates in the surface layer

Dissimilar soils:

The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Harpster Soil

Parent material: Loess or other silty material over glacial drift

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained *Hydric soil status:* Hydric

Hartsburg Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Hartsburg silty clay loam, 0 to 2 percent slopes; at an elevation of 562 feet; 660 feet west and 40 feet north of the southeast corner of sec. 23, T. 21 N., R. 4 W.; Logan County, Illinois; USGS New Holland topographic quadrangle; lat. 40 degrees 14 minutes 58 seconds N. and long. 89 degrees 31 minutes 28 seconds W., NAD 27; UTM Zone 16, 285279E and 4458507N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; slightly acid; abrupt smooth boundary.
- A1—7 to 12 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.
- A2—12 to 17 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate medium granular structure; firm; few very fine roots; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; few fine faint dark grayish brown (2.5Y 4/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bg—17 to 21 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak fine and medium subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common very dark gray (10YR 3/1) krotovinas; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- Bkg—21 to 30 inches; gray (5Y 5/1) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) and grayish brown (2.5Y 5/2) pressure faces on peds; common very dark gray (10YR 3/1) krotovinas; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; few fine and medium white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; common medium prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline; abrupt wavy boundary.
- BCkg—30 to 34 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak coarse subangular blocky structure; firm; many distinct gray (N 5/) and grayish brown (2.5Y 5/2) linings in pores and root channels; common very dark gray (10YR 3/1) krotovinas; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; many medium and coarse white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; violently effervescent among concretions, slightly effervescent in the matrix; slightly alkaline; clear wavy boundary.
- Cg—34 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common very dark gray (10YR 3/1) krotovinas; few medium white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; many medium prominent

strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to carbonates: 15 to 35 inches

Depth to the base of the cambic horizon: 24 to 50 inches

Ap, A, or AB horizon:

Hue—10YR or N Value—2 or 3

Value—2 or 3 Chroma—0 to 2

Texture—silty clay loam

BA, Bg, Bkg, Btg, BCk, BCkg, or BCg horizon:

Hue-10YR, 2.5Y, or 5Y

Value—3 to 6

Chroma-1 or 2

Texture—silty clay loam or silt loam

Cg or 2Cg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—5 or 6

Chroma—1 or 2

Texture—silt loam or loam

Content of gravel—less than 7 percent

244A—Hartsburg silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Hartsburg and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have till or outwash in the lower part of the profile
- Soils that are more than 40 inches deep to carbonates
- Soils that have carbonates within a depth of 15 inches
- Soils that have more clay and less silt in the control section Dissimilar soils:
- Somewhat poorly drained soils on summits

Properties and Qualities of the Hartsburg Soil

Parent material: Loess over silty lacustrine deposits

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.5 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Harvard Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Harvard silt loam, 2 to 5 percent slopes; at an elevation of 827 feet; 1,458 feet north and 756 feet east of the southwest corner of sec. 12, T. 42 N., R. 5 E.; De Kalb County, Illinois; USGS Marengo South topographic quadrangle; lat. 42 degrees 07 minutes 42 seconds N. and long. 88 degrees 36 minutes 17 seconds W., NAD 27; UTM Zone 16, 367355E and 4665263N, NAD 83:

- Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure parting to moderate medium granular; friable; common very fine roots; neutral; abrupt smooth boundary.
- Bt1—9 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films and very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; neutral; clear wavy boundary.
- Bt2—16 to 23 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; very few very dark grayish brown (10YR 3/2) organic coatings in root channels and in pores; moderately acid; clear wavy boundary.
- Bt3—23 to 30 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; slightly acid; clear wavy boundary.
- 2Bt4—30 to 43 inches; dark yellowish brown (10YR 4/4) sandy clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; moderately acid; clear wavy boundary.
- 2Bt5—43 to 56 inches; dark yellowish brown (10YR 4/4) loam; weak fine and medium subangular blocky structure; friable; few very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; moderately acid; clear smooth boundary.

2C—56 to 69 inches; yellowish brown (10YR 5/4), stratified silt loam and loam; massive; friable; few very fine roots; common fine distinct grayish brown (10YR 5/2) and light olive brown (2.5Y 5/3) iron depletions in the matrix; slightly acid.

Range in Characteristics

Thickness of the loess or other silty material: 20 to 40 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 33 to more than 60 inches

Ap or A horizon:

Hue—10YR

Value-2 or 3

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma-2 to 4

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt and/or 2BC horizon:

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—2 to 6

Texture—loam, silt loam, sandy clay loam, sandy loam, or clay loam

Content of gravel—less than 10 percent

2C horizon:

Hue—10YR or 2.5Y

Value—3 to 6

Chroma—3 to 6

Texture—loam, silt loam, sandy loam, or clay loam with strata of loamy sand or

sand

Content of gravel—less than 15 percent

344A—Harvard silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Harvard and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- · Soils that have a thicker surface layer

- Soils that are more than 40 inches deep to loamy outwash
- Soils that have sandy and gravelly deposits in the lower part of the profile *Dissimilar soils:*
- The somewhat poorly drained Millbrook soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Harvard Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

344B—Harvard silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Harvard and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- Soils that have a thicker surface layer
- Soils that are more than 40 inches deep to loamy outwash
- · Soils that have sandy and gravelly deposits in the lower part of the profile
- Soils that are moderately eroded

Dissimilar soils:

- The somewhat poorly drained Millbrook soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Harvard Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

344C2—Harvard silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Backslopes and shoulders

Map Unit Composition

Harvard and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- Soils that are more than 40 inches deep to loamy outwash
- Soils that have sandy and gravelly deposits in the lower part of the profile
- · Soils that are severely eroded or only slightly eroded

Dissimilar soils:

- The somewhat poorly drained Millbrook soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Harvard Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Hennepin Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Eutrudepts

Typical Pedon

Hennepin loam, in an area of Hennepin-Casco complex, 30 to 60 percent slopes; at an elevation of 670 feet; 2,400 feet south and 2,010 feet east of the northwest corner of sec. 28, T. 17 N., R. 9 E.; Bureau County, Illinois; USGS Princeton North topographic quadrangle; lat. 41 degrees 24 minutes 48 seconds N. and long. 89 degrees 27 minutes 51 seconds W.; UTM Zone 16, 294114E and 4589432N, NAD 83:

- A—0 to 5 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many medium roots; neutral; abrupt smooth boundary.
- Bt—5 to 10 inches; yellowish brown (10YR 5/4) loam; moderate fine subangular blocky structure; friable; many medium roots; common medium very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; neutral; clear smooth boundary.
- BC—10 to 16 inches; weak red (2.5YR 5/4) loam; weak fine subangular blocky structure; friable; many medium roots; violently effervescent; slightly alkaline; clear smooth boundary.
- C—16 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; violently effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: Less than 15 inches

Depth to the base of soil development: 10 to 20 inches

A or Ap horizon:

Hue—10YR or 7.5YR

Value—3 to 5

Chroma—1 to 4

Texture—loam, silt loam, sandy loam, gravelly sandy loam, or clay loam

Content of gravel—less than 35 percent

Bw horizon:

Hue-10YR or 7.5YR

Value—4 or 5

Chroma-3 or 4

Texture—loam, silt loam, sandy loam, or clay loam or the gravelly analogs of these textures

Content of gravel—less than 35 percent

C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—5 or 6

Chroma-2 to 4

Texture—loam, silt loam, sandy loam, or clay loam or the gravelly analogs of these textures

Content of gravel—less than 35 percent

820E—Hennepin-Casco complex, 12 to 30 percent slopes Setting

Landform: End moraines, outwash plains, and stream terraces

Position on the landform: Backslopes

Map Unit Composition

Hennepin and similar soils: 50 percent Casco and similar soils: 35 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- · Soils that are deeper to till or gravelly outwash
- Soils that have slopes of less than 12 percent or more than 30 percent
- Soils that have a thicker subsoil
- Soils that are more than 20 inches deep to carbonates

Dissimilar soils:

• The moderately deep Marseilles soils on backslopes

Properties and Qualities of the Hennepin Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hennepin—6e; Casco—6e

Prime farmland category: Not prime farmland

Hydric soil status: Hennepin—not hydric; Casco—not hydric

820G—Hennepin-Casco complex, 30 to 60 percent slopes

Setting

Landform: End moraines, outwash plains, and stream terraces

Position on the landform: Backslopes

Map Unit Composition

Hennepin and similar soils: 50 percent Casco and similar soils: 35 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker subsoil
- Soils that are more than 20 inches deep to carbonates
- Soils that are deeper to till or gravelly outwash
- Soils that have slopes of less than 30 percent or more than 60 percent *Dissimilar soils:*
- The moderately deep Marseilles soils on backslopes

Properties and Qualities of the Hennepin Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hennepin—7e; Casco—7e

Prime farmland category: Not prime farmland

Hydric soil status: Hennepin—not hydric; Casco—not hydric

Hesch Series

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Argiudolls

Typical Pedon

Hesch fine sandy loam, in an area of Channahon-Hesch fine sandy loams, 2 to 6 percent slopes; at an elevation of 505 feet; 470 feet south and 1,730 feet east of the northwest corner of sec. 26, T. 33 N., R. 5 E.; La Salle County, Illinois; USGS Seneca topographic quadrangle; lat. 41 degrees 18 minutes 36 seconds N. and long. 88 degrees 37 minutes 22 seconds W.; UTM Zone 16, 364161E and 4574431N, NAD 83:

- Ap—0 to 6 inches; very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; common very fine roots; 1 percent channers; slightly acid; clear smooth boundary.
- A—6 to 11 inches; 94 percent very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1) dry; mixed with 6 percent brown (7.5YR 4/4) subsoil material; weak fine and medium subangular blocky structure parting to weak fine granular; friable; common very fine roots; 1 percent channers; neutral; clear wavy boundary.
- Bt1—11 to 18 inches; brown (7.5YR 4/4) fine sandy loam; moderate medium subangular blocky structure; friable; common very fine roots; few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds; 1 percent channers; neutral; clear wavy boundary.
- Bt2—18 to 23 inches; strong brown (7.5YR 4/6) sandy loam; weak medium subangular blocky structure; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine and medium distinct strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 12 percent channers; moderately acid; clear wavy boundary.

2Cr—23 inches; light olive brown (2.5Y 5/3) sandstone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 16 inches

Depth to bedrock: 20 to 40 inches

Depth to the base of soil development: 20 to 40 inches

Ap or A horizon:

Hue-10YR or 7.5YR

Value—2 or 3

Chroma—1 to 3

Texture—sandy loam, fine sandy loam, or loam Content of channers—less than 12 percent

BA horizon (where present):

Hue-10YR or 7.5YR

Value—3 to 5

Chroma—3 to 5

Texture—sandy loam, fine sandy loam, or loam Content of channers—less than 12 percent

Bt horizon:

Hue—10YR or 7.5YR

Value—3 to 6

Chroma—3 to 6

Texture—fine sandy loam, sandy loam, or loam Content of channers—less than 12 percent

BC or C horizon (where present):

Hue—10YR or 7.5YR

Value—3 to 6

Chroma—3 to 6

Texture—sand, loamy sand, fine sand, or loamy fine sand

Content of channers—less than 12 percent

817A—Channahon-Hesch fine sandy loams, 0 to 2 percent slopes

Setting

Landform: Outwash plains, flood-plain steps, and stream terraces

Position on the landform: Summits

Map Unit Composition

Channahon and similar soils: 50 percent Hesch and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 10 inches deep to sandstone bedrock
- Soils that are more than 40 inches deep to sandstone bedrock
- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have a lighter colored surface layer
- Soils that have a thinner surface layer
- Soils that have more than 15 percent rock fragments in the profile *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Faxon soils on toeslopes
- The very poorly drained Peotone soils on toeslopes

Properties and Qualities of the Channahon Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic) Available water capacity: About 2.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Properties and Qualities of the Hesch Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 4.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: Channahon—3s; Hesch—2s

Prime farmland category: Not prime farmland

Hydric soil status: Channahon—not hydric; Hesch—not hydric

817B—Channahon-Hesch fine sandy loams, 2 to 6 percent slopes

Setting

Landform: Flood-plain steps, outwash plains, and stream terraces

Position on the landform: Backslopes and summits

Map Unit Composition

Channahon and similar soils: 50 percent Hesch and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 10 inches deep to sandstone bedrock
- Soils that are more than 40 inches deep to sandstone bedrock
- Soils that have a seasonal high water table at a depth of less than 6 feet
- · Soils that have a lighter colored surface layer

- Soils that are moderately eroded
- Soils that have more than 15 percent rock fragments in the profile
- Soils that have slopes of more than 6 percent

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Faxon soils on toeslopes
- The very poorly drained Peotone soils on toeslopes

Properties and Qualities of the Channahon Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic) Available water capacity: About 2.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Properties and Qualities of the Hesch Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 3.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: Channahon—3e; Hesch—2e

Prime farmland category: Not prime farmland

Hydric soil status: Channahon—not hydric; Hesch—not hydric

Houghton Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Houghton muck, 0 to 2 percent slopes; at an elevation of 960 feet; 465 feet south and 1,248 feet west of the northeast corner of sec. 5, T. 45 N., R. 6 E.; McHenry County,

Illinois; USGS Harvard topographic quadrangle; lat. 42 degrees 24 minutes 48 seconds N. and long. 88 degrees 33 minutes 17 seconds W., NAD 27; UTM Zone 16, 372066E and 4696848N, NAD 83:

- Oap—0 to 11 inches; muck (sapric material), black (N 2.5/) broken face and rubbed, dark gray (5Y 2.5/1) dry; about 10 percent fiber, 1 percent rubbed; moderate fine subangular blocky structure; very friable; common very fine roots; neutral; abrupt smooth boundary.
- Oa1—11 to 26 inches; muck (sapric material), 95 percent black (N 2.5/) and 5 percent dark reddish brown (5YR 3/3) broken face and rubbed; about 10 percent fiber, 1 percent rubbed; moderate fine and medium subangular blocky structure; very friable; common very fine roots; neutral; clear wavy boundary.
- Oa2—26 to 44 inches; muck (sapric material), black (N 2.5/) broken face and rubbed; about 10 percent fiber, 1 percent rubbed; weak fine subangular blocky structure; very friable; common very fine roots; slightly acid; clear wavy boundary.
- Oa3—44 to 60 inches; 95 percent muck (sapric material), black (N 2.5/) broken face and rubbed; about 10 percent fiber, 1 percent rubbed; 5 percent light brownish gray (2.5Y 6/2) very fine sandy loam; massive; very friable; common very fine roots; slightly acid.

Range in Characteristics

Thickness of the organic deposits: More than 51 inches

Surface tier:

Hue—10YR or N Value—2 to 3 Chroma—0 or 1

Subsurface tier:

Hue—7.5YR, 10YR, 5YR, or N Value—2 to 3 Chroma—0 to 2

103A—Houghton muck, 0 to 2 percent slopes

Setting

Landform: Ground moraines, end moraines, and outwash plains Position on the landform: Toeslopes

Map Unit Composition

Houghton and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have carbonates in the upper one-third of the profile
- Soils that have sandy material in the lower one-third of the profile
- Soils that have organic deposits less than 51 inches thick
- Soils in which the surface layer contains less organic matter Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow to moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 23.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 70.0 to 99.0 percent

Shrink-swell potential: Not rated

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, November through June

Depth and most likely period of ponding: 0 to 1 foot, November through June

Floodina: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

1103A—Houghton muck, undrained, 0 to 2 percent slopes

Setting

Landform: Outwash plains and ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Houghton and similar soils: 92 percent Dissimilar components: 8 percent

Components of Minor Extent

Similar soils:

- Soils that have carbonates in the upper one-third of the profile
- Soils that have sandy material in the lower one-third of the profile
- Soils that have organic deposits less than 51 inches thick
- Soils in which the surface layer contains less organic matter

Dissimilar components:

- · Soils that are subject to flooding
- Areas of water
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow to moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 23.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 70.0 to 99.0 percent

Shrink-swell potential: Not rated

Depth and months of the highest apparent seasonal high water table: At the surface to

0.5 foot below the surface, all year

Depth and most likely period of ponding: 0 to 1 foot, all year

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 5w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

Joliet Series

Taxonomic classification: Loamy, mixed, superactive, mesic Lithic Endoaquolls

Typical Pedon

Joliet silt loam, 0 to 2 percent slopes; at an elevation of 530 feet; 680 feet south and 1,484 feet east of the northwest corner of sec. 33, T. 34 N., R. 9 E.; Will County, Illinois; USGS Channahon topographic quadrangle; lat. 41 degrees 23 minutes 20 seconds N. and long. 88 degrees 12 minutes 23 seconds W., NAD 27; UTM Zone 16, 399131E and 4582649N, NAD 83:

- A1—0 to 7 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; friable; common very fine to medium roots; 1 percent gravel; slightly alkaline; gradual wavy boundary.
- A2—7 to 12 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate medium subangular blocky structure; friable; common very fine to medium roots; 2 percent gravel; moderately alkaline; clear smooth boundary.
- A3—12 to 15 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium subangular blocky structure; friable; common very fine and fine roots; 5 percent gravel; strongly effervescent; moderately alkaline; abrupt wavy boundary.
- Bg—15 to 19 inches; dark gray (2.5Y 4/1) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; strongly effervescent; moderately alkaline; abrupt smooth boundary.
- 2R—19 inches; unweathered limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 16 inches

Depth to bedrock: 10 to 20 inches

Depth to the base of soil development: 10 to 20 inches

A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—loam, silt loam, or silty clay loam Content of gravel—less than 15 percent

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—3 to 5

Chroma-0 to 2

Texture—loam, clay loam, silt loam, or silty clay loam Content of gravel—less than 15 percent

314A—Joliet silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Toeslopes

Map Unit Composition

Joliet and similar soils: 94 percent Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have bedrock at a depth of less than 10 inches or more than 20 inches
- Soils that have less sand and more clay in the control section *Dissimilar soils:*
- Shallow, somewhat poorly drained soils on summits and footslopes
- Soils that are subject to flooding

Properties and Qualities of the Joliet Soil

Parent material: Drift over dolostone or limestone

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic) Available water capacity: About 3.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

Kaneville Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs

Typical Pedon

Kaneville silt loam, 2 to 5 percent slopes; at an elevation of 875 feet; 1,025 feet north and 1,750 feet west of the southeast corner of sec. 28, T. 40 N., R. 4 E.; De Kalb

County, Illinois; USGS De Kalb topographic quadrangle; lat. 41 degrees 54 minutes 35 seconds N. and long. 88 degrees 46 minutes 43 seconds W.; UTM Zone 16, 352493E and 4641268N, NAD 83:

- Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many very fine to medium roots; slightly acid; clear smooth boundary.
- Bt1—9 to 16 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; common very fine and fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; slightly acid; gradual wavy boundary.
- Bt2—16 to 20 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; common very fine and fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds and in pores; neutral; gradual wavy boundary.
- Bt3—20 to 27 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; very few distinct light gray (10YR 7/2) (dry) silt coatings on vertical faces of peds; few fine black (10YR 2/1) manganese oxide concretions throughout; common fine strong brown (7.5YR 4/6) iron oxide concretions throughout; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; neutral; gradual wavy boundary.
- Bt4—27 to 33 inches; yellowish brown (10YR 5/4) silt loam; moderate medium prismatic structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; very few distinct light gray (10YR 7/2) (dry) silt coatings on vertical faces of peds; common medium black (10YR 2/1) manganese oxide concretions throughout; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; neutral; gradual wavy boundary.
- Bt5—33 to 44 inches; yellowish brown (10YR 5/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine black (10YR 2/1) manganese oxide concretions throughout; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common coarse distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; neutral; clear wavy boundary.
- 2BC—44 to 52 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; very few distinct brown (10YR 4/3) clay films in root channels and/or pores; common coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common coarse prominent light gray (2.5Y 7/2) iron depletions in the matrix; neutral; clear smooth boundary.
- 2C1—52 to 69 inches; brown (7.5YR 4/4), stratified loam and sandy loam; common coarse distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; massive; friable; 2 percent gravel; neutral; gradual wavy boundary.
- 2C2—69 to 80 inches; 70 percent brown (7.5YR 5/3) and 30 percent yellowish brown (10YR 5/6), stratified loam and sandy loam; common coarse distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; massive; friable; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the loess: 40 to 60 inches Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 70 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value-4 to 6

Chroma—2 or 3

Texture—silt loam

Bt horizon:

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt and/or 2BCt horizon:

Hue—10YR

Value—4 or 5

Chroma—3 to 6

Texture—loam, clay loam, silt loam, or sandy loam

Content of gravel—less than 10 percent

2C horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—3 to 6

Texture—stratified loam, silt loam, sandy clay loam, sandy loam, loamy sand, or clay loam

Content of gravel—less than 15 percent

667B—Kaneville silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and backslopes

Map Unit Composition

Kaneville and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker surface layer
- Soils that have outwash at a depth of less than 40 inches or more than 60 inches
- Soils that have till in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Kaneville Soil

Parent material: Loess and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Kendall Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Kendall silt loam, 0 to 2 percent slopes; at an elevation of about 650 feet; 1,160 feet north and 400 feet west of the center of sec. 36, T. 15 N., R. 10 E.; Douglas County, Illinois; USGS Oakland topographic quadrangle; lat. 39 degrees 42 minutes 24 seconds N. and long. 88 degrees 02 minutes 17 seconds W., NAD 27; UTM Zone 16, 411010E and 4395719N, NAD 83:

- Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light grayish brown (10YR 6/2) dry; weak medium granular structure; friable; many very fine and fine roots; few fine and medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; neutral; abrupt smooth boundary.
- E—7 to 11 inches; grayish brown (10YR 5/2) silt loam; moderate fine and medium granular structure; friable; many very fine and fine roots; common fine and medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; slightly acid; clear smooth boundary.
- BE—11 to 14 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; many very fine and fine roots; common fine and medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; slightly acid; clear smooth boundary.
- Btg1—14 to 25 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; common fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.

- Btg2—25 to 41 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; few very fine and fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg3—41 to 51 inches; 55 percent yellowish brown (10YR 5/6) and 45 percent gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak coarse subangular blocky; firm; few very fine and fine roots; common distinct gray (10YR 5/1) clay films on faces of peds; few medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; slightly acid; clear smooth boundary.
- 2Btg4—51 to 58 inches; 40 percent strong brown (7.5YR 5/6), 30 percent yellowish brown (10YR 5/6), and 30 percent gray (5Y 5/1) loam; weak coarse subangular blocky structure; friable; few distinct dark gray (10YR 4/1) clay films on faces of peds; common fine and medium black (7.5YR 2.5/1) weakly cemented nodules of iron and manganese oxide throughout; 5 percent gravel; neutral; clear smooth boundary.
- 2Cg1—58 to 74 inches; 45 percent yellowish brown (10YR 5/6), 45 percent gray (5Y 5/1), and 10 percent strong brown (7.5YR 5/6), stratified loam, sandy loam, and silt loam; massive; friable; 5 percent gravel; slightly alkaline; abrupt smooth boundary.
- 2Cg2—74 to 80 inches; 60 percent grayish brown (10YR 5/2), 30 percent gray (10YR 5/1), and 10 percent yellowish brown (10YR 5/6), stratified gravelly loam, gravelly sandy loam, and silt loam; massive; friable; 16 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the loess: 40 to 60 inches Depth to carbonates: More than 40 inches

Depth to the base of the diagnostic horizon: 40 to more than 60 inches

Ap or A horizon:

Hue—10YR Value—2 to 5 Chroma—1 to 3 Texture—silt loam

E or Eg horizon:

Hue—10YR or 2.5Y Value—4 to 7 Chroma—2 or 3 Texture—silt loam

BE horizon (where present):

Hue—7.5YR, 10YR, or 2.5Y Value—4 to 6 Chroma—2 to 6 Texture—silt loam or silty clay loam

Btg or Bt horizon:

Hue—7.5YR, 10YR, 2.5Y, or 5Y Value—4 to 6 Chroma—1 to 8 Texture—silty clay loam

2Btg, 2Bt, 2BCg, or 2BC horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 to 8

Texture—loam, clay loam, silt loam, or sandy loam

Content of gravel—less than 15 percent

2Cg or 2C horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 8

Texture—stratified silt loam, loam, sandy loam, clay loam, silty clay loam, or sandy

clay loam or the gravelly analogs of these textures

Content of gravel—less than 15 percent

242A—Kendall silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and footslopes

Map Unit Composition

Kendall and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker and darker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent
- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- Soils that are underlain by till

Dissimilar soils:

- The well drained St. Charles soils on summits
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Kendall Soil

Parent material: Loess over outwash

Drainage class: Somewhat poorly drained Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

Kernan Series

Taxonomic classification: Fine, smectitic, mesic Aeric Epiaqualfs

Typical Pedon

Kernan silt loam, 2 to 4 percent slopes; at an elevation of 632 feet; 1,240 feet north and 110 feet west of the southeast corner of sec. 21, T. 33 N., R. 2 E.; La Salle County, Illinois; USGS Starved Rock topographic quadrangle; lat. 41 degrees 18 minutes 45 seconds N. and long. 88 degrees 59 minutes 29 seconds W., NAD 27; UTM Zone 16, 333303E and 4575364N, NAD 83:

- Ap—0 to 5 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak medium granular structure; friable; common very fine and fine roots; neutral; abrupt smooth boundary.
- E—5 to 12 inches; light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; moderate medium platy structure; friable; common very fine and fine roots; neutral; abrupt wavy boundary.
- Btg—12 to 20 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium angular blocky structure; friable; common fine roots; few faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; very few faint light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; few fine black (10YR 2/1) very weakly cemented manganese oxide concretions throughout; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual wavy boundary.
- Bt1—20 to 29 inches; brown (10YR 5/3) silty clay loam; moderate fine and medium prismatic structure; friable; common very fine and fine roots; very few faint very dark grayish brown (10YR 3/2) organic coatings along root channels and pores; common faint dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; common medium brown (7.5YR 4/4) and few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium and coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; strongly acid; gradual wavy boundary.
- Bt2—29 to 36 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine and fine roots; very few distinct very dark gray (10YR 3/1) organic coatings along root channels and pores; common faint dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; common medium brown (7.5YR 4/4) and black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium distinct brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; moderately acid; clear wavy boundary.
- 2Btg—36 to 40 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; firm; few very fine and fine roots; few distinct very dark gray (10YR 3/1) organic coatings along root channels and pores; common faint dark gray (10YR 4/1) clay films on faces of peds; common medium brown

(7.5YR 4/4) and black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent gravel; neutral; gradual wavy boundary.

2BC—40 to 43 inches; 60 percent light olive brown (2.5Y 5/3) and 40 percent olive gray (5Y 5/2) silty clay loam; weak medium and coarse subangular blocky structure; firm; few medium strong brown (7.5YR 5/6) and few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; 2 percent gravel; slightly alkaline; clear wavy boundary.

2Cd—43 to 60 inches; 90 percent brown (10YR 5/3) and 10 percent olive gray (5Y 5/2) silty clay; massive; very firm; few fine black (10YR 2/1) very weakly cemented manganese oxide concretions throughout; common medium very pale brown (10YR 8/2) carbonate masses throughout; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 35 to 55 inches Depth to the base of soil development: 40 to 60 inches

Ap or A horizon:

Hue-10YR

Value—4 or 5

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue-10YR

Value-4 to 6

Chroma—2

Texture—silt loam

Btg or Bt horizon:

Hue-10YR or 2.5Y

Value-4 or 5

Chroma—2 to 4

Texture—silty clay loam or silty clay

2Bt, 2Btg, 2BC, or 2BCg horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—2 to 4

Texture—silty clay loam or silty clay

2Cd or 2Cdg horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—2 to 4

Texture—silty clay or clay

554B—Kernan silt loam, 2 to 4 percent slopes

Setting

Landform: Lake plains and ground moraines (fig. 7) Position on the landform: Backslopes and footslopes



Figure 7.—An area of Kernan silt loam, 2 to 4 percent slopes, in Starved Rock State Park.

Map Unit Composition

Kernan and similar soils: 93 percent

Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that have a thicker and darker surface layer
- Soils that are less than 35 inches deep to till
- Soils that are more than 55 inches deep to till
- Soils that have slopes of more than 4 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Streator soils on toeslopes

Properties and Qualities of the Kernan Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 60 inches to dense material Available water capacity: About 8.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May *Ponding:* None

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Kidami Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs

Typical Pedon

Kidami loam, 4 to 6 percent slopes, eroded; at an elevation of 925 feet; 885 feet south and 1,455 feet west of the northeast corner of sec. 7, T. 43 N., R. 6 E.; McHenry County, Illinois; USGS Marengo South topographic quadrangle; lat. 42 degrees 13 minutes 22 seconds N. and long. 88 degrees 34 minutes 33 seconds W., NAD 27; UTM Zone 16, 369940E and 4675716N, NAD 83:

- Ap—0 to 3 inches; dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many very fine and fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.
- A—3 to 9 inches; 70 percent dark grayish brown (10YR 4/2) and 30 percent brown (10YR 4/3) loam; weak fine subangular blocky structure parting to weak fine and medium granular; friable; common very fine and fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few prominent light gray (10YR 7/2) (dry) silt coatings on faces of peds; 1 percent gravel; slightly acid; abrupt smooth boundary.
- BE—9 to 13 inches; 55 percent brown (10YR 4/3) and 45 percent dark yellowish brown (10YR 4/4) loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots; few distinct dark brown (10YR 3/3) organic coatings on faces of peds; 1 percent gravel; moderately acid; abrupt smooth boundary.
- Bt1—13 to 21 inches; brown (7.5YR 4/4) clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common very fine roots; common distinct brown (7.5YR 4/3) clay films on faces of peds; 2 percent gravel; slightly acid; clear smooth boundary.
- Bt2—21 to 30 inches; brown (7.5YR 4/4) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; common distinct brown (7.5YR 4/3) clay films on faces of peds; 3 percent gravel; neutral; clear smooth boundary.
- BC—30 to 40 inches; 70 percent strong brown (7.5YR 4/6) and 30 percent brown (7.5YR 4/4) loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; firm; common very fine roots; few distinct brown (7.5YR 4/3) clay films on faces of peds and in pores; 5 percent gravel; slightly effervescent; slightly alkaline; gradual smooth boundary.
- C1—40 to 52 inches; brown (7.5YR 5/4) loam; massive; firm; common very fine roots; very few distinct brown (7.5YR 4/3) pressure faces; 5 percent gravel; strongly effervescent; moderately alkaline; clear smooth boundary.

C2—52 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine and medium prominent gray (10YR 6/1) iron depletions in the matrix; 4 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or silty material: Less than 18 inches

Depth to carbonates: 20 to 48 inches

Depth to the base of soil development: 24 to 55 inches

Ap or A horizon:

Hue-7.5YR or 10YR

Value—2 to 4

Chroma—1 to 3

Texture—silt loam or loam

Content of gravel—less than 10 percent

E horizon (where present):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma-2 to 4

Texture—silt loam, loam, or sandy loam

Content of gravel—less than 10 percent

BE or EB horizon (where present):

Hue-7.5YR or 10YR

Value—4 or 5

Chroma-3 or 4

Texture—silt loam, loam, or sandy loam

Content of gravel—less than 10 percent

Bt or 2Bt horizon:

Hue-7.5YR or 10YR

Value—4 to 6

Chroma-3 to 6

Texture—clay loam, loam, or silty clay loam

Content of gravel—2 to 15 percent

Bt, 2Bt, BC, 2BC, Bk, and/or 2Bk horizon:

Hue-7.5YR or 10YR

Value-4 to 6

Chroma—3 to 6

Texture—loam

Content of gravel—2 to 15 percent

C or 2C horizon:

Hue-5YR or 7.5YR

Value—4 to 6

Chroma-3 to 6

Texture—loam or sandy loam

Content of gravel—5 to 15 percent

527C2—Kidami loam, 4 to 6 percent slopes, eroded

Setting

Landform: End moraines and ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Kidami and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are more than 18 inches deep to till
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that have more sand and less silt in the till
- · Soils that have a surface layer of clay loam

Dissimilar soils:

- Nearly level, somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Kidami Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

527D2—Kidami loam, 6 to 12 percent slopes, eroded

Setting

Landform: End moraines and ground moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Kidami and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are more than 18 inches deep to till
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have a surface layer of clay loam
- · Soils that have more sand and less silt in the till
- Soils that have slopes of less than 6 percent or more than 12 percent Dissimilar soils:
- · Nearly level, somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Kidami Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

La Rose Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Argiudolls

Typical Pedon

La Rose loam, 5 to 10 percent slopes, eroded; at an elevation of 852 feet; 2,440 feet north and 2,200 feet west of the southeast corner of sec. 23, T. 44 N., R. 6 E.; McHenry County, Illinois; USGS Woodstock topographic quadrangle; lat. 42 degrees 16 minutes 34 seconds N. and long. 88 degrees 29 minutes 58 seconds W., NAD 27; UTM Zone 16, 376349E and 4681524N, NAD 83:

Ap—0 to 7 inches; 97 percent very dark grayish brown (10YR 3/2) and 3 percent dark brown (7.5YR 3/4) loam, brown (10YR 5/3) dry; weak medium subangular blocky

- structure parting to weak fine and medium granular; friable; common very fine roots; 2 percent gravel; neutral; abrupt smooth boundary.
- BA—7 to 11 inches; 75 percent dark brown (7.5YR 3/4) and 25 percent very dark grayish brown (10YR 3/2) clay loam; weak medium subangular blocky structure; firm; common very fine roots; 2 percent gravel; neutral; abrupt smooth boundary.
- Bt1—11 to 15 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common very fine roots; very few distinct dark brown (7.5YR 3/2) organic coatings in root channels and in pores; common distinct dark brown (7.5YR 3/4) clay films on faces of peds; 2 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- Bt2—15 to 21 inches; brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; common very fine roots; very few distinct dark brown (7.5YR 3/2) organic coatings in root channels and in pores; few distinct dark brown (7.5YR 3/4) clay films on faces of peds; 3 percent gravel; strongly effervescent; slightly alkaline; gradual smooth boundary.
- C—21 to 60 inches; brown (7.5YR 5/4) loam; massive; friable; common very fine roots; 4 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 12 inches

Depth to carbonates: 10 to 24 inches

Depth to the base of soil development: 12 to 24 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 to 3

Texture—loam, silt loam, clay loam, or silty clay loam

Content of gravel—less than 7 percent

Bt and/or BC horizon:

Hue-10YR, 7.5YR, or 5YR

Value—4 or 5

Chroma—3 or 4

Texture—clay loam

Content of gravel—less than 7 percent

C horizon:

Hue-10YR or 7.5YR

Value-4 to 6

Chroma-3 or 4

Texture—loam or silt loam

Content of gravel—2 to 10 percent

60C2—La Rose loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

La Rose and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a surface layer of clay loam
- Soils that are more than 24 inches deep to till
- Soils that have slopes of less than 5 percent or more than 10 percent *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the La Rose Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

60D2—La Rose loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes and shoulders

Map Unit Composition

La Rose and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a surface layer of clay loam
- · Soils that are more than 24 inches deep to till
- Soils that have slopes of less than 10 percent or more than 18 percent Dissimilar soils:
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the La Rose Soil

Parent material: Till

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

830—Landfills

 This map unit consists of accumulations of garbage and other refuse and rubble resulting from the demolition of buildings and pavement. The accumulations are typically covered by a layer of compacted earth. Some of the landfills are active, but some have been abandoned.

Map Unit Composition

Landfills: 90 percent

Dissimilar components: 10 percent

Components of Minor Extent

Dissimilar components:

- The well drained, loamy Orthents on summits and backslopes
- The moderately well drained, clayey Orthents on summits and backslopes

Lawson Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls

Typical Pedon

Lawson silt loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 490 feet; 1,460 feet north and 2,440 feet east of the southwest corner of sec. 9, T. 33 N., R. 7 E.; Grundy County, Illinois; USGS Morris topographic quadrangle; lat. 41 degrees 21 minutes 04 seconds N. and long. 88 degrees 25 minutes 56 seconds W., NAD 27; UTM Zone 16, 380192E and 4578738N, NAD 83:

- Ap—0 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; slightly alkaline; gradual smooth boundary.
- A1—14 to 26 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; slightly alkaline; gradual smooth boundary.
- A2—26 to 33 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; slightly alkaline; gradual smooth boundary.
- Cg1—33 to 60 inches; dark grayish brown (10YR 4/2) silty clay loam; massive; friable; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; slightly alkaline; gradual smooth boundary.
- Cg2—60 to 80 inches; 80 percent gray (10YR 6/1) and 20 percent dark gray (10YR 4/1), stratified loam and silt loam; massive; friable; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Ap and A horizons:

Hue—10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam or silty clay loam

Cg or C horizon:

Hue—10YR or 2.5Y

Value—3 to 6

Chroma—1 to 3

Texture—silt loam, silty clay loam, or loam

3451A—Lawson silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Lawson and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are overlain by light-colored, recent deposits
- · Soils that have a thinner subsurface layer
- Soils that have less silt and more clay in the upper one-half of the profile
- Soils that have more gravel in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 1 foot or more than 2 feet

Dissimilar soils:

• The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Lawson Soil

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None

Months in which flooding does not occur: July, August, September, October Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where protected from flooding or not

frequently flooded during the growing season

Hydric soil status: Not hydric

8451A—Lawson silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Lawson and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are overlain by light-colored, recent deposits
- · Soils that have a thinner subsurface layer
- Soils that have less silt and more clay in the upper one-half of the profile
- Soils that have more gravel in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 1 foot or more than 2 feet

Dissimilar soils:

The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Lawson Soil

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None

Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Lena Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Lena muck, 0 to 2 percent slopes; at an elevation of 642 feet; 900 feet south and 2,100 feet west of the northeast corner of sec. 3, T. 31 N., R. 14 E.; Kankakee County, Illinois; USGS Illiana Heights topographic quadrangle; lat. 41 degrees 12 minutes 22 seconds N. and long. 87 degrees 35 minutes 37 seconds W., NAD 27; UTM Zone 16, 450217E and 4561803N, NAD 83:

- Oa1—0 to 8 inches; muck (sapric material), black (10YR 2/1) broken face and rubbed; about 5 percent fiber, 1 percent rubbed; moderate fine and medium subangular blocky structure; friable; many very fine to coarse roots; common snail shells; violently effervescent; moderately alkaline; clear wavy boundary.
- Oa2—8 to 24 inches; muck (sapric material), very dark gray (N 3/) broken face and rubbed; about 5 percent fiber, 1 percent rubbed; weak fine and medium subangular blocky structure; friable; many very fine to coarse roots; 1 percent fine sand grains; common snail shells; violently effervescent; moderately alkaline; gradual wavy boundary.
- Oa3—24 to 36 inches; muck (sapric material), very dark gray (N 3/) broken face and rubbed; about 8 percent fiber, 2 percent rubbed; massive; friable; common very fine and fine roots; 3 percent fine sand grains; common snail shells; violently effervescent; moderately alkaline; gradual wavy boundary.
- Oa4—36 to 60 inches; muck (sapric material), black (N 2.5/) broken face and rubbed; about 3 percent fiber, a trace rubbed; massive; very friable; common very fine and fine roots; 5 percent fine sand grains; common snail shells; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the organic material: More than 51 inches

Surface tier:

Hue—10YR or N Value—2 to 3 Chroma—0 or 1

Subsurface tier:

Hue—7.5YR, 10YR, or N Value—2 to 3 Chroma—0 to 3

210A—Lena muck, 0 to 2 percent slopes

Setting

Landform: Ground moraines and outwash plains

Position on the landform: Toeslopes

Map Unit Composition

Lena and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have organic deposits less than 51 inches thick
- Soils that have sandy material in the lower one-half of the profile
- Soils in which the surface layer contains less organic material
- · Soils that have a thin overwash of silt loam
- Soils that do not have carbonates in the surface layer

Dissimilar soils:

• Poorly drained, noncalcareous mineral soils on toeslopes

Properties and Qualities of the Lena Soil

Parent material: Herbaceous organic material

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 23.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 60.0 to 99.0 percent

Shrink-swell potential: Not rated

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, November through June

Depth and most likely period of ponding: 0 to 1 foot, November through June

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

Loran Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls **Taxadjunct features:** The Loran soil in map unit 572C2 has a thinner dark surface

layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Aquollic Hapludalf.

Typical Pedon

Loran silt loam, 2 to 5 percent slopes; at an elevation of 610 feet; 2,200 feet south and 1,560 feet east of the northwest corner of sec. 17, T. 33 N., R. 1 E.; La Salle County, Illinois; USGS Spring Valley topographic quadrangle; lat. 41 degrees 20 minutes 02 seconds N. and long. 89 degrees 08 minutes 20 seconds W.; UTM Zone 16, 321019E and 4578043N, NAD 83:

- Ap—0 to 10 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.
- AB—10 to 15 inches; 70 percent black (10YR 2/1) and 30 percent dark grayish brown (10YR 4/2) silt loam, dark gray (10YR 4/1) dry; weak fine and medium subangular blocky structure; friable; common very fine and fine roots; neutral; clear wavy boundary.
- Bt1—15 to 23 inches; olive brown (2.5Y 4/3) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine black (10YR 2/1) manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium faint dark grayish brown (2.5Y 4/2) iron depletions in the matrix; neutral; gradual wavy boundary.
- Bt2—23 to 32 inches; light olive brown (2.5Y 5/3) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; common faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; common fine black (10YR 2/1) manganese oxide concretions throughout; common medium yellowish brown (10YR 5/6) iron oxide concretions throughout; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly alkaline; gradual wavy boundary.
- Bt3—32 to 41 inches; light olive brown (2.5Y 5/3) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; common faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; common fine black (10YR 2/1) manganese oxide concretions throughout; common medium yellowish brown (10YR 5/6) iron oxide concretions throughout; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly alkaline; clear wavy boundary.
- 2BC—41 to 46 inches; 90 percent olive brown (2.5Y 4/3) and 10 percent dark grayish brown (2.5Y 4/2) silty clay; weak coarse prismatic structure; very firm; few very fine roots; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; strongly effervescent; moderately alkaline; clear smooth boundary.
- 2Cr—46 to 70 inches; 60 percent grayish brown (2.5Y 5/2) and 40 percent olive brown (2.5Y 4/3) clayey shale; massive; extremely firm; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess or other silty material: 30 to 50 inches

Depth to bedrock: 40 to 60 inches

Depth to the base of soil development: 40 to 55 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma-1 or 2

Texture—silt loam

Bt horizon:

Hue—10YR or 2.5Y

Value—3 to 5

Chroma—2 or 3

Texture—silty clay loam or silt loam

2Bt horizon that formed in till (where present):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—4 to 6

Texture—clay loam, loam, or silt loam

2BCg, 2Bg, 3BCg, or 3Bg horizon that formed in residuum:

Hue-2.5Y, 5Y, 5GY, or 5G

Value-4 to 6

Chroma—1 to 4

Texture—silty clay, clay, channery silty clay, or channery clay

2Cr or 3Cr horizon:

Hue—2.5Y, 5Y, 5GY, or 5G

Value-4 to 6

Chroma—1 to 4

572A—Loran silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Loran and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of more than 2 percent
- Soils that have bedrock at a depth of less than 40 inches or more than 60 inches
- Soils that have a seasonal high water table at a depth of more than 2 feet
- · Soils that have a lighter colored surface layer

Dissimilar soils:

- The well drained Marseilles soils on summits and backslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Loran Soil

Parent material: Loess over till over residuum derived from clayey shale

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very slow or slow Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic) Available water capacity: About 8.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

572B—Loran silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Shoulders

Map Unit Composition

Loran and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have bedrock at a depth of less than 40 inches or more than 60 inches
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have a lighter colored surface layer

Dissimilar soils:

- The well drained Marseilles soils on summits and backslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Loran Soil

Parent material: Loess over till over residuum derived from clayey shale

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Very slow or slow Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic) Available water capacity: About 9.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

572C2—Loran silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Shoulders

Map Unit Composition

Loran and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have bedrock at a depth of less than 40 inches or more than 60 inches
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The well drained Marseilles soils on summits and backslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Loran Soil

Parent material: Loess over till over residuum derived from clayey shale

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic) Available water capacity: About 9.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland Hydric soil status: Not hydric

Lorenzo Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Typic Argiudolls

Typical Pedon

Lorenzo loam, 2 to 4 percent slopes; at an elevation of 510 feet; 320 feet south and 1,720 feet west of the northeast corner of sec. 35, T. 33 N., R. 5 E.; La Salle County, Illinois; USGS Seneca topographic quadrangle; lat. 41 degrees 17 minutes 44 seconds N. and long. 88 degrees 36 minutes 58 seconds W., NAD 27; UTM Zone 16, 364686E and 4572840N, NAD 83:

- Ap—0 to 6 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium granular structure; friable; neutral; common very fine roots; clear smooth boundary.
- AB—6 to 9 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 5/2) dry; weak medium angular blocky structure; friable; neutral; clear smooth boundary.
- Bt1—9 to 16 inches; brown (7.5YR 4/4) clay loam; weak medium and coarse angular blocky structure; firm; common distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; 3 percent gravel; slightly acid; abrupt smooth boundary.
- 2Bt2—16 to 18 inches; brown (7.5YR 4/4) gravelly loam; weak coarse subangular blocky structure; very friable; few distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; 20 percent gravel; slightly alkaline; abrupt smooth boundary.
- 2C—18 to 60 inches; yellowish brown (10YR 5/4) extremely gravelly sand; single grain; loose; 70 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 5 to 15 inches

Depth to sandy and gravelly deposits: 12 to 24 inches

Depth to carbonates: 12 to 24 inches

Depth to the base of soil development: 12 to 24 inches

A, Ap, or AB horizon:

Hue-7.5YR or 10YR

Value—2 or 3

Chroma—1 or 2

Texture—loam, silt loam, sandy loam, or clay loam

Bt, 2Bt, or 2BC horizon:

Hue-7.5YR, 10YR, or 5YR

Value—4 or 5

Chroma-3 to 6

Texture—clay loam, loam, or sandy clay loam or the gravelly analogs of these textures

Content of gravel—2 to 35 percent

2C horizon:

Hue—7.5YR or 10YR

Value-4 to 6

Chroma—3 to 6

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand

Content of gravel—20 to 85 percent

318B—Lorenzo loam, 2 to 4 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Backslopes and summits

Map Unit Composition

Lorenzo and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

Soils that have a lighter colored surface layer

- Soils that have sandy and gravelly deposits at a depth of less than 12 inches or more than 24 inches
- Soils that have carbonates at a depth of less than 12 inches or more than 24 inches
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that are moderately eroded

Dissimilar soils:

Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Lorenzo Soil

Parent material: Loamy outwash over calcareous sand and gravel

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

318C2—Lorenzo loam, 4 to 6 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

Lorenzo and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- Soils that have sandy and gravelly deposits at a depth of less than 12 inches or more than 24 inches
- Soils that have carbonates at a depth of less than 12 inches or more than 24 inches
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that are severely eroded or only slightly eroded

Dissimilar soils:

· Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Lorenzo Soil

Parent material: Loamy outwash over calcareous sand and gravel

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Marseilles Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Marseilles silt loam, 35 to 60 percent slopes; at an elevation of 669 feet; 2,200 feet west and 1,180 feet south of the northeast corner of sec. 14, T. 15 N., R. 8 E.; Bureau County, Illinois; USGS Wyanet topographic quadrangle; lat. 41 degrees 17 minutes 20 seconds N. and long. 89 degrees 32 minutes 13 seconds W., NAD 27; UTM Zone 16, 287557E and 4573935N, NAD 83:

- A—0 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many very fine and few fine roots; slightly acid; abrupt smooth boundary.
- BE—4 to 9 inches; yellowish brown (10YR 5/4) silt loam; moderate medium platy structure parting to weak very fine subangular blocky; friable; many very fine roots; common distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine iron and manganese oxide accumulations; neutral; clear smooth boundary.
- Bt1—9 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; moderate very fine and fine subangular blocky structure; friable; many very fine and few fine roots;

common distinct light gray (10YR 7/2) (dry) clay depletions and common distinct dark brown (10YR 4/3) clay films on faces of peds; few fine iron and manganese oxide accumulations; slightly acid; clear smooth boundary.

- Bt2—15 to 23 inches; brown (10YR 5/3) silty clay loam; strong fine and medium subangular blocky structure; friable; many very fine and few fine roots; few distinct light gray (10YR 7/2) (dry) clay depletions and many distinct dark brown (10YR 4/3) clay films on faces of peds; few fine iron and manganese oxide accumulations; slightly acid; clear smooth boundary.
- 2Bt3—23 to 36 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine and few medium roots; many prominent dark brown (10YR 4/3) clay films on faces of peds; few fine iron and manganese oxide accumulations; few medium prominent yellowish red (5YR 5/8) masses of iron accumulation in the matrix; slightly acid; gradual wavy boundary.
- 2Cr1—36 to 51 inches; olive gray (5Y 5/2), soft shale; firm; common very fine and few fine roots; common prominent dark brown (10YR 4/3) clay films on shale fragments; few fine iron and manganese oxide accumulations; few medium prominent yellowish red (5YR 5/8) masses of iron accumulation in the matrix; slightly acid; gradual wavy boundary.
- 2Cr2—51 to 60 inches; olive (5Y 5/3), soft shale; very firm; few very fine roots; few prominent dark brown (10YR 4/3) clay films on shale fragments; few fine iron and manganese oxide accumulations; neutral.

Range in Characteristics

```
Depth to residuum: 0 to 30 inches
Depth to bedrock: 20 to 40 inches
Ap or A horizon:
   Hue-10YR
   Value-2 to 5
   Chroma—2 or 3
   Texture—silt loam or silty clay loam
BE or E horizon (where present):
   Hue-10YR
   Value-4 or 5
   Chroma—2 to 4
   Texture—silt loam or silty clay loam
Bt horizon:
   Hue-10YR
   Value—4 or 5
   Chroma—2 to 6
   Texture—silt loam or silty clay loam
2Bt horizon:
   Hue-7.5YR, 10YR, 2.5Y, or 5Y
   Value-4 to 6
   Chroma—2 to 4
   Texture—clay loam, silt loam, silty clay loam, or silty clay
   Content of gravel—less than 15 percent
2Cr horizon:
   Hue—10YR, 2.5Y, 5Y, or N
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Value—4 to 6 Chroma—0 to 4 Texture—soft, noncalcareous shale with a variable amount of hard fragments of shale; fragments of sandstone in some pedons

549B—Marseilles silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Marseilles and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less silt in the lower part of the profile
- Soils that are moderately eroded
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches *Dissimilar soils:*
- The somewhat poorly drained Appleriver soils on summits and footslopes

Properties and Qualities of the Marseilles Soil

Parent material: Loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

549C2—Marseilles silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Shoulders

Map Unit Composition

Marseilles and similar soils: 98 percent

Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:

• Soils that have more clay and less silt in the lower part of the profile

- · Soils that have a surface layer of silty clay loam
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches Dissimilar soils:
- The somewhat poorly drained Appleriver soils on summits and footslopes

Properties and Qualities of the Marseilles Soil

Parent material: Loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 4.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

549D2—Marseilles silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less silt in the lower part of the profile
- Soils that have a surface layer of silty clay loam
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches

Dissimilar soils:

• The somewhat poorly drained Appleriver soils on summits and footslopes

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 4.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

549F—Marseilles silt loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 100 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less silt in the lower part of the profile
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches
- Soils that are moderately eroded

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 5.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None

Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

549G—Marseilles silt loam, 35 to 60 percent slopes Setting

Landform: Ground moraines

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 100 percent

Soils of Minor Extent

Similar soils:

Soils that have bedrock at a depth of less than 20 inches or more than 40 inches

- Soils that have more clay and less silt in the lower part of the profile
- Soils that are moderately eroded

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 5.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

794G—Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 30 percent Northfield and similar soils: 30 percent Ritchey and similar soils: 30 percent Dissimilar components: 10 percent

Components of Minor Extent

Similar soils:

- Soils that are moderately eroded
- · Soils that have bedrock at various depths
- Soils that have carbonates in the surface layer
- Soils that have slopes of less than 30 percent or more than 60 percent *Dissimilar components:*
- Strongly sloping soils on backslopes
- Areas of rock outcrop
- · Areas that have extreme vertical slopes

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 5.7 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Northfield Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)

Available water capacity: About 2.9 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Ritchey Soil

Parent material: Till over dolostone or limestone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)

Available water capacity: About 3.5 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—8; Northfield—8; Ritchey—8

Prime farmland category: Not prime farmland

Hydric soil status: Marseilles—not hydric; Northfield—not hydric; Ritchey—not hydric

Mayville Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaguic Hapludalfs

Typical Pedon

Mayville silt loam, 2 to 5 percent slopes; at an elevation of 1,040 feet; 1,450 feet south and 210 feet east of the northwest corner of sec. 8, T. 10 N., R. 18 E.; Washington County, Wisconsin; USGS Hartford West topographic quadrangle; lat. 43 degrees 21 minutes 00 seconds N. and long. 88 degrees 23 minutes 51 seconds W., NAD 27; UTM Zone 16, 386731E and 4800631N, NAD 83:

- Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; neutral; abrupt wavy boundary.
- E—6 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium platy structure; very friable; neutral; abrupt smooth boundary.
- BE—8 to 12 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; neutral; clear smooth boundary.
- Bt1—12 to 24 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; firm; common faint dark brown (10YR 3/3) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation in the matrix in the lower part of the horizon; neutral; clear smooth boundary.
- Bt2—24 to 28 inches; brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; firm; common faint very dark grayish brown (10YR 3/2) organoclay films on faces of peds; few medium faint dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

- 2Bt3—28 to 32 inches; brown (10YR 4/3) clay loam grading to yellowish brown (10YR 5/4) loam in the lower part; moderate coarse subangular blocky structure; firm; few faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few medium faint dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; 3 percent gravel; slightly effervescent in the lower part; neutral; clear smooth boundary.
- 2C—32 to 60 inches; light yellowish brown (10YR 6/4) gravelly sandy loam; massive; friable; few medium prominent brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; few medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; 17 percent gravel and 1 percent cobbles; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 20 to 40 inches Depth to carbonates: 20 to 40 inches

Depth to the base of soil development: 24 to 48 inches

Ap or A horizon:

Hue-10YR

Value—3 to 5

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam

BE horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam

Bt horizon:

Hue—10YR

Value—3 or 4

Chroma—3 or 4

Texture—silty clay loam or silt loam

2Bt horizon:

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—loam, clay loam, or sandy clay loam

Content of gravel—3 to 12 percent

2C horizon:

Hue-7.5YR or 10YR

Value—5 or 6

Chroma—3 or 4

Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam

Content of gravel—5 to 20 percent

193C2—Mayville silt loam, 5 to 10 percent slopes, eroded

Landform: Ground moraines and end moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Mayville and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 20 inches deep to till
- Soils that are more than 40 inches deep to till
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have slopes of less than 5 percent or more than 10 percent

Dissimilar soils:

- Nearly level, somewhat poorly drained soils on summits and footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Mayville Soil

Parent material: Loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Millbrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon

Millbrook silt loam, 0 to 2 percent slopes; at an elevation of 595 feet; 2,440 feet south and 1,800 feet west of the northeast corner of sec. 31, T. 33 N., R. 10 E.; Will County, Illinois; USGS Symerton topographic quadrangle; lat. 41 degrees 17 minutes 56

seconds N. and long. 88 degrees 07 minutes 06 seconds W., NAD 27; UTM Zone 16, 406367E and 4572543N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.
- BE—7 to 11 inches; 55 percent brown (10YR 5/3) and 45 percent dark grayish brown (10YR 4/2) silty clay loam, light brownish gray (10YR 6/2) dry; weak very thin platy structure parting to weak fine granular; friable; common very fine and fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds and in pores; few fine distinct dark gray (10YR 4/1) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt1—11 to 24 inches; brown (10YR 5/3) silty clay loam; moderate medium and coarse prismatic structure parting to weak fine and medium subangular blocky; friable; common very fine and fine roots; many prominent dark gray (10YR 4/1) clay films on faces of peds and in pores; many prominent very dark gray (10YR 3/1) organoclay films on faces of peds; common fine black (7.5YR 2.5/1) weakly cemented manganese oxide nodules throughout; common fine prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- 2Bt2—24 to 35 inches; yellowish brown (10YR 5/6) clay loam; weak medium and coarse prismatic structure parting to weak fine and medium subangular blocky; friable; common very fine roots; many prominent dark gray (10YR 4/1) clay films on faces of peds and in pores; common prominent very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common fine distinct yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common fine and medium prominent grayish brown (10YR 5/2) iron depletions in the matrix; 1 percent gravel; slightly alkaline; gradual wavy boundary.
- 2Bt3—35 to 46 inches; yellowish brown (10YR 5/6) loam; weak medium and coarse subangular blocky structure; friable; common very fine roots; common prominent brown (10YR 4/3) clay films on faces of peds; common fine and medium faint brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common medium prominent grayish brown (10YR 5/2) iron depletions in the matrix; 3 percent gravel; slightly alkaline; clear wavy boundary.
- 2BC—46 to 53 inches; brownish yellow (10YR 6/6) loam; weak medium and coarse subangular blocky structure; very friable; common medium faint yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 14 percent gravel; strongly effervescent; slightly alkaline; clear wavy boundary.
- 2C1—53 to 65 inches; 80 percent yellowish brown (10YR 5/4) and 20 percent dark grayish brown (10YR 4/2) sandy loam; massive; very friable; common medium and coarse distinct dark yellowish brown (10YR 4/6) and common coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.
- 2C2—65 to 80 inches; brown (10YR 5/3), stratified sandy loam and loamy sand with thin lenses of coarse sand; massive; very friable; 9 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 24 to 40 inches Depth to carbonates: More than 40 inches Depth to the base of soil development: 40 to 65 inches

Ap or A horizon: Hue—10YR

Value—2 or 3 Chroma—1 to 3

Texture—silt loam

E, EB, or BE horizon:

Hue—10YR

Value—4 to 6

Chroma—2 or 3

Texture—silt loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—1 to 6

Texture—silty clay loam or silt loam

2Bt, 2Btg, 2BC, or 2BCg horizon:

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—1 to 8

Texture—sandy loam, loam, silt loam, clay loam, or sandy clay loam

Content of gravel—less than 15 percent

2C or 2Cg horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 to 8

Texture—stratified sandy loam, loam, silt loam, clay loam, or loamy sand

Content of gravel—less than 15 percent

219A—Millbrook silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Footslopes and summits

Map Unit Composition

Millbrook and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker surface layer
- Soils that are deeper to outwash
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The well drained Harvard soils on summits
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Millbrook Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0 feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

Millington Series

Taxonomic classification: Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls

Typical Pedon

Millington silt loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 720 feet; 800 feet north and 2,500 feet west of the southeast corner of sec. 14, T. 46 N., R. 1 E.; Winnebago County, Illinois; USGS South Beloit topographic quadrangle; lat. 42 degrees 27 minutes 27 seconds N. and long. 89 degrees 05 minutes 19 seconds W., NAD 27; UTM Zone 16, 328258E and 4702690N, NAD 83:

- Ap—0 to 8 inches; black (10YR 2/1) silt loam (containing about 15 percent sand), dark gray (10YR 4/1) dry; moderate fine granular structure; friable; many very fine and fine roots; few snail shells; slightly effervescent; slightly alkaline; abrupt smooth boundary.
- A1—8 to 15 inches; black (10YR 2/1) silt loam (containing about 20 percent sand), dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; many very fine and fine roots; few snail shells; slightly effervescent; slightly alkaline; clear smooth boundary.
- A2—15 to 26 inches; black (10YR 2/1) silt loam (containing about 20 percent sand), dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; many very fine and fine roots; common snail shells; strongly effervescent; moderately alkaline; clear smooth boundary.
- Bg1—26 to 34 inches; variegated black (10YR 2/1) and dark grayish brown {10YR 4/2) silt loam (containing about 25 percent sand); moderate fine subangular blocky structure parting to moderate fine granular; friable; common very fine and fine roots; many snail shells; strongly effervescent; moderately alkaline; clear smooth boundary.
- Bg2—34 to 53 inches; dark grayish brown (2.5Y 4/2) loam; weak medium prismatic structure; friable; few very fine and fine roots; few fine prominent dark reddish brown (5YR 3/3) masses of iron accumulation in the matrix; many medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; 5 percent gravel; violently effervescent; moderately alkaline; clear smooth boundary.
- Cg—53 to 60 inches; light grayish brown (2.5Y 6/2) loamy sand; single grain; loose; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Depth to carbonates: Less than 10 inches

Depth to the base of soil development: 24 to 48 inches

Ap, A, or AB horizon:

Hue-10YR, 2.5Y, or N

Value—2 or 3

Chroma-0 to 2

Texture—dominantly silt loam; loam in the lower part in some pedons

Content of gravel—less than 5 percent

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 to 5

Chroma—0 to 2

Texture—loam, silt loam, clay loam, or silty clay loam

Content of gravel—less than 15 percent

Cg horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—2 to 6

Chroma—0 to 2

Texture—stratified loam, silt loam, sandy loam, silty clay loam, or clay loam

Content of gravel—less than 15 percent

3082A—Millington silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Millington and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more silt in the upper and middle parts of the profile
- Soils that have more gravel in the lower part of the profile
- Soils that have a thinner subsurface layer and are lighter colored in the upper part of the profile
- Soils that do not have carbonates in the surface layer

Dissimilar soils:

· The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Millington Soil

Parent material: Calcareous alluvium Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil status: Hydric

Millsdale Series

Taxonomic classification: Fine, mixed, active, mesic Typic Argiaquolls

Typical Pedon

Millsdale silty clay loam, 0 to 2 percent slopes; at an elevation of 545 feet; 2,360 feet north and 2,440 feet west of the southeast corner of sec. 27, T. 35 N., R. 9 E.; Will County, Illinois; USGS Channahon topographic quadrangle; lat. 41 degrees 29 minutes 05 seconds N. and long. 88 degrees 11 minutes 11 seconds W., NAD 27; UTM Zone 16, 400951E and 4593250N, NAD 83:

- A1—0 to 5 inches; black (N 2.5/) silty clay loam, dark gray (N 4/) dry; moderate fine and medium granular structure; friable; common very fine to medium roots; neutral; gradual wavy boundary.
- A2—5 to 10 inches; black (N 2.5/) silty clay loam, dark gray (N 4/) dry; weak medium subangular blocky structure; friable; common very fine to medium roots; neutral; gradual wavy boundary.
- A3—10 to 18 inches; very dark gray (N 3/) silty clay loam, gray (N 5/) dry; moderate medium subangular blocky structure; firm; common very fine roots; common fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; common medium prominent dark gray (2.5Y 4/1) iron depletions in the matrix; slightly alkaline; gradual wavy boundary.
- Btg1—18 to 25 inches; dark gray (2.5Y 4/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; common prominent very dark gray (N 3/) organo-clay films on faces of peds and in pores; common medium dark yellowish brown (10YR 4/4) weakly cemented iron and manganese oxide nodules throughout; common fine prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; 1 percent gravel; slightly alkaline; gradual wavy boundary.
- Btg2—25 to 36 inches; gray (2.5Y 5/1) silty clay loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; common very fine roots; few prominent black (2.5Y 2.5/1) organo-clay films on surfaces along root channels; common medium dark yellowish brown (10YR 4/4) weakly cemented iron and manganese oxide nodules throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent gravel; slightly alkaline; clear smooth boundary.
- 2R—36 inches; very pale brown (10YR 7/3) limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 23 inches

Depth to bedrock: 20 to 40 inches

Depth to the base of soil development: 20 to 40 inches

A, Ap, or AB horizon:

Hue-10YR, 2.5Y, or N

Value—2 or 3

Chroma-0 to 2

Texture—silty clay loam, clay loam, loam, or silt loam

Btg or Bt horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—3 to 6

Chroma-0 to 4

Texture—clay loam, silty clay loam, silty clay, or clay

Content of gravel—1 to 14 percent

2Btg, 2Bt, 2BCg, or 2BC horizon (where present):

Hue-10YR, 2.5Y, 5Y, or N

Value—4 to 7

Chroma—1 to 4

Texture—clay loam, silty clay loam, silty clay, or clay

Content of gravel—2 to 14 percent

2C or 2Cg horizon (where present):

Hue-10YR, 2.5Y, 5Y, or N

Value—4 to 7

Chroma-1 to 4

Texture—clay loam or loam

Content of gravel—2 to 14 percent

317A—Millsdale silty clay loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Toeslopes

Map Unit Composition

Millsdale and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches
- Soils that have more sand and less clay in the control section

Dissimilar soils:

- Moderately deep, somewhat poorly drained soils on summits and footslopes
- Soils that are subject to flooding

Properties and Qualities of the Millsdale Soil

Parent material: Drift over dolostone or limestone

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow

Depth to restrictive feature: 20 to 40 inches to bedrock (lithic) Available water capacity: About 6.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: At the surface to 1 foot below the surface, January through June

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through June

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Mokena Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Aquic Argiudolls

Typical Pedon

Mokena silt loam, 0 to 2 percent slopes; at an elevation of 636 feet; 1,980 feet south and 194 feet east of the northwest corner of sec. 7, T. 29 N., R. 12 W.; Kankakee County, Illinois; USGS Kankakee topographic quadrangle; lat. 41 degrees 00 minutes 53 seconds N. and long. 87 degrees 46 minutes 15 seconds W., NAD 27; UTM Zone 16, 435183E and 4540680N, NAD 83:

- Ap—0 to 5 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.
- A—5 to 12 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to weak fine and medium granular; friable; common very fine and fine roots; neutral; gradual wavy boundary.
- AB—12 to 15 inches; 70 percent black (10YR 2/1) and 30 percent very dark grayish brown (10YR 3/2) loam, dark gray (10YR 4/1) dry; weak fine and medium subangular blocky structure parting to weak fine and medium granular; friable; few very fine and fine roots; neutral; gradual wavy boundary.
- Bt1—15 to 20 inches; olive brown (2.5Y 4/3) loam; moderate medium subangular blocky structure; firm; few very fine and fine roots; many distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; common prominent black (10YR 2/1) organic coatings in root channels; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.
- Bt2—20 to 25 inches; light olive brown (2.5Y 5/3) loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; common prominent black (10YR 2/1) organic coatings in root channels; common medium black (N 2.5/) manganese oxide nodules throughout; common fine faint grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.
- Bt3—25 to 32 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium prismatic structure; firm; few very fine roots; common distinct very dark grayish

brown (10YR 3/2) organo-clay films on faces of peds; common medium black (N 2.5/) manganese oxide nodules throughout; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; slightly alkaline; gradual smooth boundary.

- Bt4—32 to 38 inches; 50 percent yellowish brown (10YR 5/4) and 50 percent dark grayish brown (2.5Y 4/2) clay loam; weak medium and coarse angular blocky structure; firm; few very fine roots; few fine distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common medium black (N 2.5/) manganese oxide nodules throughout; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; slightly alkaline; clear smooth boundary.
- 2Bt5—38 to 42 inches; gray (5Y 5/1) silty clay; weak fine and medium subangular blocky structure; very firm; few very fine and fine roots; few prominent dark grayish brown (2.5Y 4/2) clay films on faces of peds; common medium black (N 2.5/) manganese oxide nodules throughout; many medium prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; 1 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.
- 2Cd—42 to 60 inches; 80 percent gray (5Y 5/1) and 20 percent yellowish brown (10YR 5/4) silty clay; massive; very firm; few fine black (N 2.5/) manganese oxide nodules throughout; common medium light gray (2.5Y 7/1) calcium carbonate concretions throughout; 2 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Depth to till or lacustrine deposits: 30 to 50 inches

Depth to carbonates: 30 to 50 inches

Depth to the base of soil development: 30 to 60 inches

Ap and A horizons:

Hue—10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam or loam

Bt horizon:

Hue-10YR or 2.5Y

Value—3 to 5

Chroma—2 to 4

Texture—loam, clay loam, sandy clay loam, or silty clay loam

2Bt horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay or clay

Content of gravel—less than 7 percent

2Cd horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 4

Texture—silty clay or clay

Content of gravel—less than 10 percent

295A—Mokena silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and lake plains
Position on the landform: Summits and footslopes

Map Unit Composition

Mokena and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Mokena Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash and till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 30 to 60 inches to dense material Available water capacity: About 7.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

295B—Mokena silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes and footslopes

Map Unit Composition

Mokena and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

· Soils that have less sand and more clay in the upper one-half of the profile

• Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*

· The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Mokena Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash and till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 30 to 60 inches to dense material Available water capacity: About 7.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Mona Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Oxyaquic Argiudolls

Taxadjunct features: The Mona soil in map unit 448C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Mona silt loam, 2 to 5 percent slopes; at an elevation of 718 feet; 130 feet south and 600 feet west of the northeast corner of sec. 20, T. 23 N., R. 13 W.; Vermilion County, Illinois; USGS East Lynn topographic quadrangle; lat. 40 degrees 26 minutes 36 seconds N. and long. 87 degrees 50 minutes 21 seconds W., NAD 27; UTM Zone 16, 428819E and 4477307N, NAD 83:

- Ap—0 to 11 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common fine and medium roots; slightly acid; clear smooth boundary.
- Bt1—11 to 15 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common fine and medium roots; common faint brown (10YR 4/3) clay films on faces of peds; common distinct very dark gray

- (10YR 3/1) organo-clay films on faces of peds; slightly acid; clear smooth boundary.
- 2Bt2—15 to 22 inches; yellowish brown (10YR 5/4) clay loam; moderate fine subangular blocky structure; friable; common medium to very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; neutral; clear smooth boundary.
- 2Bt3—22 to 31 inches; yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common faint brown (10YR 4/3) clay films on faces of peds; few faint very dark gray (10YR 3/1) organo-clay films on faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- 2Bt4—31 to 39 inches; light olive brown (2.5Y 5/4) clay loam; weak medium subangular blocky structure; firm; few fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- 3BC—39 to 44 inches; grayish brown (2.5Y 5/2) silty clay; weak coarse subangular blocky structure; very firm; few fine white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; few fine strong brown (7.5YR 5/8) weakly cemented iron oxide nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 3Cd—44 to 60 inches; grayish brown (2.5Y 5/2) silty clay; massive; very firm; few fine white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; few fine strong brown (7.5YR 5/8) weakly cemented iron oxide nodules throughout; common medium faint gray (10YR 5/1) iron depletions in the matrix; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; 3 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Thickness of the loess or other silty material: Less than 24 inches

Depth to dense till: 36 to 54 inches Depth to carbonates: 30 to 54 inches

Ap, A, or AB horizon:

Hue-10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam

Part of the Bt horizon that formed in loess (where present):

Hue—10YR

Value—4 to 6

Chroma—3 or 4

Texture—silty clay loam

Part of the Bt, BC, 2Bt, or 2BC horizon that formed in outwash:

Hue-10YR

Value—4 to 6

Chroma—3 or 4

Texture—clay loam, silty clay loam that contains more than 15 percent sand, or sandy clay loam

Content of gravel—less than 10 percent

2BC, 2Cd, 3BC, or 3Cd horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay or clay
Content of gravel—less than 10 percent

448B—Mona silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and glacial lakes (relict) Position on the landform: Summits and backslopes

Map Unit Composition

Mona and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are more than 50 inches deep to till
- Soils that have less sand and more clay in the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Mona Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash and lacustrine deposits or till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 36 to 54 inches to dense material Available water capacity: About 8.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

448C2—Mona silt loam, 5 to 10 percent slopes, eroded *Setting*

Landform: Ground moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Mona and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are more than 50 inches deep to till
- · Soils that have less sand and more clay in the profile
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are severely eroded or only slightly eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

- The nearly level, somewhat poorly drained Mokena soils on summits and footslopes
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Mona Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash and lacustrine deposits or till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 36 to 54 inches to dense material Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Moundprairie Series

Taxonomic classification: Fine-silty, mixed, superactive, calcareous, mesic Mollic Fluvaquents

Typical Pedon

Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 447 feet; 560 feet east and 1,100 feet south of the northwest corner of sec. 2, T. 15 N., R. 11 E.; Bureau County, Illinois; USGS Spring Valley topographic quadrangle; lat. 41 degrees 19 minutes 03 seconds N. and long. 89 degrees 11 minutes 52 seconds W.; UTM Zone 16, 316053E and 4576344N, NAD 83:

- Ap—0 to 9 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; slightly effervescent; slightly alkaline; abrupt smooth boundary.
- C1—9 to 20 inches; stratified very dark gray (10YR 3/1) and dark grayish brown (10YR 4/2) silty clay loam and loam; massive; friable; many prominent black (7.5YR 2.5/1) iron and manganese oxide accumulations throughout; slightly effervescent; slightly alkaline; clear smooth boundary.
- C2—20 to 31 inches; stratified very dark gray (10YR 3/1), grayish brown (10YR 5/2), and dark grayish brown (10YR 4/2) silty clay loam, loam, and sandy loam; massive; friable; many prominent black (7.5YR 2.5/1) iron and manganese oxide accumulations throughout; slightly effervescent; moderately alkaline; clear smooth boundary.
- C3—31 to 43 inches; stratified very dark gray (10YR 3/1) and dark grayish brown (10YR 4/2) silty clay loam and loam; massive; friable; many prominent black (7.5YR 2.5/1) iron and manganese oxide accumulations throughout; slightly effervescent; moderately alkaline; clear wavy boundary.
- Ab—43 to 60 inches; black (N 2/) silty clay loam; moderate medium subangular blocky structure; friable; many prominent black (7.5YR 2.5/1) iron and manganese oxide accumulations; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the recent silty alluvial sediments: 20 to 60 inches Depth to the buried soil: 20 to 60 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1

Texture—silt loam or silty clay loam

C or Cg horizon:

Hue-10YR or 2.5Y

Value-3 to 5

Chroma-1 or 2

Texture—silt loam or silty clay loam; commonly stratified

Ab horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 or 3

Chroma—0 or 1

Texture—silt loam or silty clay loam

1480A—Moundprairie silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Moundprairie and similar soils: 94 percent

Dissimilar components: 6 percent

Components of Minor Extent

Similar soils:

- Soils that have more sand and less silt in the control section
- Soils that do not have carbonates in the surface layer
- Soils that do not have a buried soil within a depth of 60 inches

Dissimilar components:

· Areas of water

Properties and Qualities of the Moundprairie Soil

Parent material: Alluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

0.5 foot below the surface, all year

Depth and most likely period of ponding: 0 to 1 foot, all year

Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 5w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

3480A—Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Moundprairie and similar soils: 85 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less silt in the control section
- Soils that do not have carbonates in the surface layer
- Soils that do not have a buried soil within a depth of 60 inches

Dissimilar soils:

· The poorly drained Millington soils on flood plains

Properties and Qualities of the Moundprairie Soil

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained and either protected from

flooding or not frequently flooded during the growing season

Hydric soil status: Hydric

Muscatune Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Muscatune silt loam, 0 to 2 percent slopes; at an elevation of 879 feet; 450 feet east and 222 feet south of the northwest corner of sec. 36, T. 26 N., R. 10 E.; Winnebago County, Illinois; USGS Seward topographic quadrangle; lat. 42 degrees 12 minutes 58 seconds N. and long. 89 degrees 17 minutes 57 seconds W., NAD 27; UTM Zone 16, 310220E and 4676333N, NAD 83:

- Ap—0 to 6 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; common very fine and fine roots; moderately acid; abrupt smooth boundary.
- A1—6 to 11 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; friable; common very fine and fine roots; moderately acid; clear smooth boundary.
- A2—11 to 16 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; friable; common very fine and fine roots; few fine black (5YR 2.5/1) iron and manganese oxide concretions throughout; moderately acid; clear smooth boundary.
- BA—16 to 22 inches; dark brown (10YR 3/3) silty clay loam; moderate fine subangular blocky structure; friable; common very fine and fine roots; common prominent very pale brown (10YR 8/2) (dry) clay depletions on faces of peds; few fine dark reddish brown (5YR 3/2) iron and manganese oxide concretions throughout; moderately acid; gradual smooth boundary.

- Btg1—22 to 28 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; common distinct very pale brown (10YR 8/2) (dry) clay depletions on faces of peds; common fine dark reddish brown (5YR 3/2) iron and manganese oxide concretions throughout; moderately acid; clear smooth boundary.
- Btg2—28 to 33 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; few distinct very pale brown (10YR 8/2) (dry) clay depletions on faces of peds; few fine dark reddish brown (5YR 3/2) iron and manganese oxide concretions throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg3—33 to 40 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots; common faint grayish brown (10YR 5/2) clay films on faces of peds; many fine dark reddish brown (5YR 3/2) iron and manganese oxide concretions throughout; many fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; moderately acid; gradual smooth boundary.
- Btg4—40 to 46 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate coarse angular blocky structure; firm; few very fine roots; common faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; many fine dark reddish brown (5YR 3/2) iron and manganese oxide concretions throughout; many fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; moderately acid; clear wavy boundary.
- Cg—46 to 60 inches; light brownish gray (10YR 6/2), grayish brown (10YR 5/2), and yellowish brown (10YR 5/6) silt loam; massive; friable; very dark brown (10YR 2/2) fillings in numerous threadlike channels and some larger burrows; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 64 inches

Ap, A, or AB horizon:

Hue—10YR

Value-2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silt loam or silty clay loam

C horizon:

Hue—10YR or 2.5Y

Value—5 or 6

Chroma—2 to 4

Texture—silt loam or silty clay loam

51A—Muscatune silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits

Map Unit Composition

Muscatune and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

• Soils that have a thinner surface layer

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent
- Soils that have carbonates below a depth of 40 inches

Dissimilar soils:

- The well drained Osco and Greenbush soils on summits and shoulders
- The poorly drained Sable soils on summits and toeslopes

Properties and Qualities of the Muscatune Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

814A—Muscatune-Buckhart silt loams, 0 to 3 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits, footslopes, and backslopes

Map Unit Composition

Muscatune and similar soils: 55 percent Buckhart and similar soils: 35 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils underlain by till or outwash
- Soils that have slopes of more than 3 percent
- Soils that have a thinner surface layer
- Soils that have carbonates at a depth of less than 40 inches
- Soils that have a seasonal high water table at a depth of more than 3.5 feet *Dissimilar soils:*
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Muscatune Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.5 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Properties and Qualities of the Buckhart Soil

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Muscatune—1; Buckhart—2e

Prime farmland category: Prime farmland

Hydric soil status: Muscatune—not hydric; Buckhart—not hydric

MW—Miscellaneous water

 This map unit consists of bodies of water used primarily as municipal or agricultural waste treatment lagoons. Included in mapping are established earth berms around the lagoons.

Nappanee Series

Taxonomic classification: Fine, illitic, mesic Aeric Epiaqualfs **Taxadjunct features:** The Nappanee soil in map unit 228C3 is deeper to redoximorphic depletions than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine, illitic, mesic Aquic Hapludalf.

Typical Pedon

Nappanee silt loam, 2 to 4 percent slopes; at an elevation of 665 feet; 1,220 feet south and 500 feet east of the northwest corner of sec. 10, T. 44 N., R. 11 E.; Lake County, Illinois; USGS Libertyville topographic quadrangle; lat. 42 degrees 18 minutes 35 seconds N. and long. 87 degrees 56 minutes 33 seconds W., NAD 27; UTM Zone 16, 422327E and 4684589N, NAD 83:

- A—0 to 4 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 6/1) dry; weak very fine and fine granular structure; friable; many very fine and fine roots; neutral; abrupt smooth boundary.
- E—4 to 9 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak thick platy structure; friable; many very fine and fine roots; neutral; clear smooth boundary.
- Bt1—9 to 19 inches; dark grayish brown (10YR 4/2) silty clay; moderate fine and medium subangular blocky structure; firm; common very fine roots; common prominent very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; common fine and medium dark yellowish brown (10YR 4/6) weakly cemented iron oxide concretions throughout; common fine black (10YR 2/1) strongly cemented manganese oxide nodules throughout; 1 percent gravel; slightly alkaline; clear smooth boundary.
- Bt2—19 to 23 inches; brown (10YR 4/3) silty clay; moderate medium subangular blocky structure; firm; common very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine distinct gray (10YR 5/1) iron depletions in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- Bt3—23 to 28 inches; brown (10YR 5/3) silty clay; weak medium prismatic structure parting to moderate medium subangular blocky; very firm; common very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; 3 percent gravel; slightly effervescent; moderately alkaline; gradual smooth boundary.
- Btk1—28 to 36 inches; brown (10YR 5/3) silty clay; weak medium prismatic structure parting to weak medium subangular blocky; very firm; common very fine roots; common distinct dark grayish brown (2.5Y 4/2) and grayish brown (2.5Y 5/2) clay films on faces of peds and in pores; common distinct dark brown (7.5YR 3/2) organo-clay films on surfaces along pores; many fine and medium pale yellow (2.5Y 8/2) calcium carbonate concretions throughout; common medium and coarse prominent strong brown (7.5YR 5/6) and common medium and coarse faint

yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; 2 percent gravel; strongly effervescent; moderately alkaline; gradual smooth boundary.

- Btk2—36 to 46 inches; yellowish brown (10YR 5/4) silty clay; weak medium prismatic structure parting to weak coarse subangular blocky; very firm; common very fine roots; common prominent pale yellow (2.5Y 8/2) calcium carbonate coatings on horizontal faces of peds; many prominent dark gray (2.5Y 4/1) and gray (2.5Y 5/1) clay films on all faces of peds; common prominent dark brown (7.5YR 3/2) organoclay films on surfaces along pores; common fine and medium strong brown (7.5YR 5/8) weakly cemented iron oxide concretions throughout; few fine black (7.5YR 2.5/1) strongly cemented manganese oxide concretions throughout; common fine and medium pale yellow (2.5Y 8/2) calcium carbonate concretions throughout; common fine and medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; 2 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.
- Cd—46 to 60 inches; yellowish brown (10YR 5/4) silty clay loam; massive; very firm; few fine black (7.5YR 2.5/1) strongly cemented manganese oxide concretions throughout; common medium pale yellow (2.5Y 8/2) calcium carbonate concretions throughout; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 20 inches

Depth to carbonates: 18 to 40 inches

Depth to dense till: 30 to 60 inches; ranges to 20 inches in pedons in severely eroded areas

Depth to the base of soil development: 24 to 60 inches

A or Ap horizon:

Hue—10YR

Value—3 to 5

Chroma—1 to 3

Texture—silt loam or silty clay loam

Content of gravel—less than 5 percent

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—1 or 2

Texture—silt loam

Content of gravel—less than 5 percent

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay or clay

Content of gravel—1 to 10 percent

Btk or Bk horizon (where present):

Hue—10YR or 2.5Y

Value-4 to 6

Chroma—2 to 4

Texture—silty clay or clay

Content of gravel—1 to 10 percent

BC or BCg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay, clay, or silty clay loam

Content of gravel—2 to 10 percent

Cd horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma-2 to 4

Texture—silty clay, clay, or silty clay loam

Content of gravel—2 to 10 percent

228B—Nappanee silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes and footslopes

Map Unit Composition

Nappanee and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that are moderately eroded
- Soils that have a thicker and darker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 2 percent or more than 4 percent Dissimilar soils:
- · The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Nappanee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 30 to 60 inches to dense material Available water capacity: About 6.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

228C2—Nappanee silty clay loam, 4 to 6 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Nappanee and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that have more clay in the surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 4 percent or more than 6 percent *Dissimilar soils:*
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Nappanee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 24 to 60 inches to dense material Available water capacity: About 4.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

228C3—Nappanee silty clay loam, 4 to 6 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines (fig. 8) Position on the landform: Shoulders and backslopes

Map Unit Composition

Nappanee and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are moderately eroded
- Soils that have slopes of less than 4 percent or more than 6 percent *Dissimilar soils:*
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Nappanee Soil

Parent material: Till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 20 to 50 inches to dense material Available water capacity: About 3.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.2 to 1.5 percent



Figure 8.—An area of Nappanee silty clay loam, 4 to 6 percent slopes, severely eroded.

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Northfield Series

Taxonomic classification: Loamy, mixed, active, mesic Lithic Hapludalfs

Typical Pedon

Northfield silt loam, in an area of Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes; at an elevation of 560 feet; 1,345 feet west and 2,320 feet north of the southeast corner of sec. 18, T. 33 N., R. 4 E.; La Salle County, Illinois; USGS Ottawa topographic quadrangle; lat. 41 degrees 19 minutes 15 seconds N. and long. 88 degrees 48 minutes 23 seconds W.; UTM Zone 16, 348844E and 4577052N, NAD 83:

- A—0 to 3 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.
- Bt1—3 to 10 inches; dark yellowish brown (10YR 4/4) loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few distinct dark grayish brown (10YR 4/2) organic coatings throughout; few distinct brown (10YR 4/3) clay films throughout; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 1 percent gravel (sandstone fragments); neutral; gradual wavy boundary.
- Bt2—10 to 16 inches; yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; common very fine roots; few distinct dark grayish brown (10YR 4/2) organic coatings throughout; few distinct dark yellowish brown (10YR 4/4) clay films throughout; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; 3 percent gravel (sandstone fragments); strongly acid; gradual wavy boundary.
- R—16 inches; yellowish brown (10YR 5/4) sandstone bedrock.

Range in Characteristics

Depth to bedrock: 10 to 20 inches

Depth to the base of soil development: 10 to 20 inches

A horizon:

Hue—7.5YR or 10YR Value—2 to 4 Chroma—1 to 4

Texture—silt loam, loam, or sandy loam

Content of gravel and channers—less than 15 percent

E horizon (where present):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma-2 or 3

Texture—silt loam, loam, or sandy loam

Content of gravel and channers—less than 15 percent

Bt horizon:

Hue—7.5YR or 10YR

Value—3 to 5

Chroma-3 or 4

Texture—loam or silt loam

Content of gravel and channers—less than 15 percent

Content of cobbles and flagstones—less than 10 percent

2BC horizon (where present):

Hue-7.5YR or 10YR

Value—3 to 6

Chroma—3 to 6

Texture—sand, fine sand, loamy sand, or loamy fine sand or the channery analogs of these textures

Content of gravel and channers—less than 15 percent

Content of cobbles and flagstones—less than 10 percent

794G—Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 30 percent Northfield and similar soils: 30 percent Ritchey and similar soils: 30 percent Dissimilar components: 10 percent

Components of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have bedrock at various depths
- Soils that have carbonates in the surface layer
- Soils that have slopes of less than 30 percent or more than 60 percent *Dissimilar components:*
- Strongly sloping soils on backslopes
- Areas of rock outcrop
- Areas that have extreme vertical slopes

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 5.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Northfield Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)

Available water capacity: About 2.9 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Ritchey Soil

Parent material: Till over dolostone or limestone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic) Available water capacity: About 3.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—8; Northfield—8; Ritchey—8

Prime farmland category: Not prime farmland

Hydric soil status: Marseilles—not hydric; Northfield—not hydric; Ritchey—not hydric

802B—Orthents, loamy, undulating

Setting

Landform: Outwash plains, ground moraines, leveled land, and fill areas

Position on the landform: Summits and backslopes

Map Unit Composition

Orthents, loamy, and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

· Soils that have more silt and less sand in the profile

- Soils that have a seasonal high water table at a depth of less than 3.5 feet
- Soils that have carbonates at or near the surface
- Soils that have more clay and less silt in the profile
- Soils that have slopes of less than 1 percent or more than 6 percent *Dissimilar soils:*
- · Areas of undisturbed soils
- The poorly drained Drummer and Elpaso soils on toeslopes

Properties and Qualities of the Loamy Orthents

Parent material: Earthy fill Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 3.5 to 5.0 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

802D—Orthents, loamy, rolling

Setting

Landform: Outwash plains and ground moraines

Position on the landform: Backslopes

Map Unit Composition

Orthents, loamy, and similar soils: 92 percent

Dissimilar components: 8 percent

Components of Minor Extent

Similar soils:

- · Soils that have more sand and less clay in the profile
- Soils that have a seasonal high water table at a depth of less than 3.5 feet
- Soils that have carbonates at or near the surface
- Soils that have more clay and less silt in the profile
- Soils that have slopes of less than 6 percent or more than 12 percent

Dissimilar components:

- · Areas of undisturbed soils
- Areas of gravel, cobbles, and boulders
- The poorly drained Drummer and Elpaso soils on toeslopes

Properties and Qualities of the Loamy Orthents

Parent material: Earthy fill Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 3.5 to 5.0 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

804D—Orthents, acid, undulating and rolling

Setting

Landform: Leveled land, spoil piles, and stream terraces Position on the landform: Backslopes and summits

Map Unit Composition

Orthents, acid, and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

Soils that have more sand and less clay in the profile

• Soils that have a seasonal high water table at a depth of less than 3.5 feet

• Soils that have slopes of less than 1 percent or more than 16 percent Dissimilar soils:

· Areas of undisturbed soils

Properties and Qualities of the Acid Orthents

Parent material: Earthy fill Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 3.5 to 5.0 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 7s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

804G—Orthents, acid, steep

Setting

Landform: Leveled land, spoil piles, and stream terraces (fig. 9)

Position on the landform: Backslopes and summits

Map Unit Composition

Orthents, acid, and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the profile
- Soils that have a seasonal high water table at a depth of less than 3.5 feet
- Soils that have slopes of less than 20 percent or more than 60 percent

Dissimilar soils:

Areas of undisturbed soils

Properties and Qualities of the Acid Orthents

Parent material: Earthy fill Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches



Figure 9.—An area of Orthents, acid, steep, along the bluffs of the Illinois River. The lack of vegetation on the spoil piles is a result of the very low pH of these soils.

Available water capacity: About 7.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 3.5 to 5.0 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 7s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

805B—Orthents, clayey, undulating

Setting

Landform: Outwash plains, lake plains, leveled land, and fill areas *Position on the landform:* Summits and backslopes

Map Unit Composition

Orthents, clayey, and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have more silt and less clay in the profile
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- · Soils that have carbonates at or near the surface
- Soils that have more sand and less clay in the profile
- Soils that have slopes of less than 1 percent or more than 6 percent *Dissimilar soils:*
- Areas of undisturbed soils
- The poorly drained Ashkum and Bryce soils on toeslopes
- The very poorly drained Houghton and Peotone soils on toeslopes

Properties and Qualities of the Clayey Orthents

Parent material: Earthy fill

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Osco Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls **Taxadjunct features:** The Osco soil in map unit 86C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Osco silt loam, 2 to 5 percent slopes; at an elevation of 855 feet; 316 feet north and 88 feet west of the southeast corner of sec. 23, T. 24 N., R. 6 E.; Carroll County, Illinois; USGS Lanark topographic quadrangle; lat. 42 degrees 03 minutes 13.4 seconds N. and long. 89 degrees 45 minutes 48.2 seconds W., NAD 27; UTM Zone 16, 271316E and 4659439N, NAD 83:

Ap—0 to 10 inches; very dark brown (10YR 2/2) silt loam, very dark grayish brown (10YR 3/2) dry; moderate fine granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

- A—10 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium and coarse granular structure; friable; common fine roots; strongly acid; clear smooth boundary.
- BA—14 to 20 inches; dark yellowish brown (10YR 3/4) and dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; friable; common fine roots; few distinct light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.
- Bt1—20 to 26 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; few distinct gray (10YR 6/1) (dry) silt coatings and common faint dark brown (10YR 3/3) clay films on faces of peds; strongly acid; clear smooth boundary.
- Bt2—26 to 37 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct light brownish gray (10YR 6/2) (dry) silt coatings and many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine faint brown (10YR 5/3) and common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; many prominent very dark gray (N 3/) and dark brown (7.5YR 3/2) iron and manganese oxide concretions in the matrix; strongly acid; clear smooth boundary.
- Bt3—37 to 45 inches; light yellowish brown (10YR 6/4) silty clay loam; moderate coarse subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; gradual smooth boundary.
- BC—45 to 55 inches; yellowish brown (10YR 5/4) and brown (10YR 4/3) silty clay loam; weak coarse angular blocky structure; friable; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; gradual smooth boundary.
- C—55 to 60 inches; yellowish brown (10YR 5/4) and brown (10YR 4/3) silt loam; massive; friable; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches

Depth to carbonates: More than 48 inches

Depth to the base of soil development: 40 to more than 60 inches

Ap, A, or AB horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam

Bt horizon:

Hue-10YR

Value-4 to 6

Chroma—3 or 4

Texture—silty clay loam or silt loam

BC, C, or Cg horizon:

Hue-10YR or 2.5Y

Value—4 or 5

Chroma-2 to 6

Texture—silt loam or silty clay loam

86B—Osco silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits and shoulders

Map Unit Composition

Osco and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 4 feet
- Soils that have slopes of less than 2 percent or more than 5 percent
- · Soils that have till in the lower part of the profile

Dissimilar soils:

- The somewhat poorly drained Muscatune soils on summits
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

86C2—Osco silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Osco and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- · Soils that are severely eroded or only slightly eroded
- Soils that have a seasonal high water table at a depth of less than 4 feet
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have till in the lower part of the profile

Dissimilar soils:

- The somewhat poorly drained Muscatune soils on summits
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Otter Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon

Otter silt loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 795 feet; 1,275 feet south and 800 feet east of the northwest corner of sec. 25, T. 42 N., R. 4 E.; De Kalb County, Illinois; USGS Genoa topographic quadrangle; lat. 42 degrees 05 minutes 31 seconds N. and long. 88 degrees 43 minutes 22 seconds W., NAD 27; UTM Zone 16, 357520E and 4661424N, NAD 83:

- A1—0 to 11 inches; black (N 2.5/) silt loam, dark gray (N 4/) dry; moderate fine granular structure; friable; common very fine to medium roots; neutral; clear smooth boundary.
- A2—11 to 16 inches; black (N 2.5/) silt loam, dark gray (N 4/) dry; moderate fine and medium subangular blocky structure; friable; common very fine to medium roots; neutral; clear smooth boundary.

A3—16 to 21 inches; black (2.5Y 2.5/1) silt loam, dark gray (2.5Y 4/1) dry; moderate medium subangular blocky structure; friable; common very fine and fine roots; neutral; clear wavy boundary.

- A4—21 to 27 inches; black (2.5Y 2.5/1) silt loam, dark grayish brown (2.5Y 4/2) dry; moderate medium subangular blocky structure; friable; common very fine and fine roots; common fine prominent yellowish brown (10YR 5/4) masses of iron accumulation throughout; neutral; clear wavy boundary.
- Bg—27 to 34 inches; black (5Y 2.5/1) silty clay loam, dark gray (5Y 4/1) dry; moderate medium angular blocky structure; friable; common very fine to medium roots; few faint very dark gray (N 3/) organic coatings on faces of peds; common fine prominent yellowish brown (10YR 5/4) masses of iron accumulation throughout; neutral; clear smooth boundary.
- BCg—34 to 41 inches; grayish brown (2.5Y 5/2) silt loam; weak medium angular blocky structure; friable; common very fine and fine roots; few faint very dark gray (N 3/) organic coatings in root channels and in pores; many medium prominent yellowish brown (10YR 5/8 and 5/6) masses of iron accumulation throughout; slightly effervescent; slightly alkaline; gradual wavy boundary.
- Cg—41 to 65 inches; gray (2.5Y 5/1), stratified loam and silt loam; massive; friable; many medium prominent brownish yellow (10YR 6/8) and yellowish brown (10YR 5/8) masses of iron accumulation throughout; 1 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 50 inches

Depth to carbonates: More than 24 inches

Depth to the base of soil development: 24 to 50 inches

A horizon:

Hue-7.5YR, 10YR, 2.5Y, or N

Value—2 to 3

Chroma—0 to 2

Texture—silt loam, loam, or silty clay loam

Bg or BCg horizon:

Hue-7.5YR, 10YR, 2.5Y, or N

Value-2 to 6

Chroma—0 to 4

Texture—silt loam, sandy loam, silty clay loam, or loam

Cg horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—2 to 6

Chroma—0 to 4

Texture—silt loam, loam, sandy loam, or silty clay loam

Content of gravel—less than 15 percent

3076A—Otter silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Otter and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner subsurface layer and are lighter colored in the upper part of the profile
- Soils that have less silt and more clay in the upper one-half of the profile
- Soils that have more gravel in the lower part of the profile

Dissimilar soils:

- The somewhat poorly drained Lawson soils in the slightly higher positions on flood plains
- The very poorly drained Houghton soils on toeslopes
- The poorly drained Millington soils on flood plains

Properties and Qualities of the Otter Soil

Parent material: Alluvium Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 7.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained and either protected from

flooding or not frequently flooded during the growing season

Hydric soil status: Hydric

Ozaukee Series

Taxonomic classification: Fine, illitic, mesic Oxyaquic Hapludalfs

Typical Pedon

Ozaukee silt loam, 2 to 4 percent slopes; at an elevation of 780 feet; 2,540 feet north and 2,200 feet east of the southwest corner of sec. 31, T. 39 N., R. 10 E.; Du Page County, Illinois; USGS Naperville topographic quadrangle; lat. 41 degrees 49 minutes 14 seconds N. and long. 88 degrees 08 minutes 18 seconds W., NAD 27; UTM Zone 16, 405455E and 4630483N, NAD 83:

- Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, yellowish brown (10YR 5/4) dry; moderate very fine and fine granular structure; friable; many very fine and fine roots; neutral; clear smooth boundary.
- BE—4 to 10 inches; brown (10YR 4/3) silt loam; weak thick platy structure parting to moderate fine subangular blocky; friable; many very fine roots; few distinct dark

- grayish brown (10YR 4/2) coatings on faces of peds; moderately acid; clear smooth boundary.
- 2Bt1—10 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; many distinct brown (10YR 4/3) clay films on faces of peds; 1 percent gravel; slightly acid; abrupt smooth boundary.
- 2Bt2—16 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films and brown (10YR 4/3) clay films on faces of peds; common fine strong brown (7.5YR 5/8) very weakly cemented iron oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; neutral; clear smooth boundary.
- 2Bt3—21 to 27 inches; light olive brown (2.5Y 5/3) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common fine strong brown (7.5YR 5/8) very weakly cemented iron oxide concretions throughout; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2Bt4—27 to 33 inches; light olive brown (2.5Y 5/3) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common fine strong brown (7.5YR 5/8) very weakly cemented iron oxide concretions throughout; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concentrations throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; 8 percent gravel; strongly effervescent; moderately alkaline; clear smooth boundary.
- 2BCt—33 to 39 inches; light olive brown (2.5Y 5/3) silty clay loam; weak fine and medium subangular blocky structure; firm; common very fine roots; few distinct grayish brown (2.5Y 5/2) clay films on faces of peds; common fine strong brown (7.5YR 5/8) very weakly cemented iron oxide concretions throughout; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concentrations throughout; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; 6 percent gravel; strongly effervescent; moderately alkaline; abrupt smooth boundary.
- 2Cd—39 to 60 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; firm; few very fine roots; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium white (10YR 8/1) calcium carbonate concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; 6 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 18 inches

Depth to carbonates: 15 to 40 inches

Depth to the base of soil development: 20 to 45 inches

Ap or A horizon:

Hue-10YR

Value-2 to 4

Chroma—1 to 3

Texture—silt loam or silty clay loam

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam

Bt horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silty clay loam Content of gravel—1 to 10 percent

2Bt horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 or 5

Chroma-3 or 4

Texture—silty clay loam, silty clay, or clay

Content of gravel—1 to 15 percent

2Cd horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value-4 to 6

Chroma-2 to 4

Texture—silty clay loam or clay loam

Content of gravel—1 to 15 percent

530B—Ozaukee silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Backslopes and summits

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 4 percent *Dissimilar soils:*
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 8.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

530C2—Ozaukee silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines Position on the landform: Backslopes and shoulders

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have a surface layer of silty clay loam
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 4 percent or more than 6 percent

Dissimilar soils:

- The nearly level, somewhat poorly drained Blount and Beecher soils on footslopes and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

530C3—Ozaukee silty clay loam, 4 to 6 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that are moderately eroded
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 4 percent or more than 6 percent

Dissimilar soils:

- The nearly level, somewhat poorly drained Blount and Beecher soils on footslopes and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- · The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 6.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

530D2—Ozaukee silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have a surface layer of silty clay loam
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 6 percent or more than 12 percent

Dissimilar soils:

- The nearly level, somewhat poorly drained Blount and Beecher soils on footslopes and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None

Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

530D3—Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that are moderately eroded
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 6 percent or more than 12 percent

Dissimilar soils:

- The nearly level, somewhat poorly drained Blount and Beecher soils on footslopes and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- · The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 6.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

530E2—Ozaukee silt loam, 12 to 20 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have a surface layer of silty clay loam
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 12 percent or more than 20 percent

Dissimilar soils:

- The nearly level, somewhat poorly drained Blount and Beecher soils on footslopes and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 7.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

530F—Ozaukee silt loam, 20 to 30 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Ozaukee and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have more sand and less clay in the upper one-half of the profile
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that are moderately eroded
- Soils that have more sand and less silt in the lower part of the profile
- Soils that have slopes of less than 20 percent or more than 30 percent *Dissimilar soils:*
- · Severely eroded soils on shoulders and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes

Properties and Qualities of the Ozaukee Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 45 inches to dense material Available water capacity: About 7.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Peotone Series

Taxonomic classification: Fine, smectitic, mesic Cumulic Vertic Endoaquolls

Typical Pedon

Peotone silty clay loam, 0 to 2 percent slopes; at an elevation of 707 feet; 315 feet south and 2,233 feet east of the northwest corner of sec. 21, T. 29 N., R. 9 E.; Ford County, Illinois; USGS Cabery topographic quadrangle; lat. 40 degrees 58 minutes 49 seconds N. and long. 88 degrees 12 minutes 00 seconds W., NAD 27; UTM Zone 16, 399043E and 4537265N, NAD 83:

- Ap—0 to 7 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- A—7 to 13 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- Bg1—13 to 27 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; moderate medium angular blocky structure; friable; common very fine roots; neutral; clear smooth boundary.
- Bg2—27 to 41 inches; dark gray (10YR 4/1) silty clay; moderate fine prismatic structure; firm; common very fine roots; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly alkaline; clear smooth boundary.
- Bg3—41 to 50 inches; dark gray (10YR 4/1) silty clay; moderate medium prismatic structure; firm; few very fine roots; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly alkaline; clear smooth boundary.
- Cg—50 to 60 inches; dark gray (10YR 4/1) silty clay loam; massive; firm; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Depth to carbonates: More than 30 inches

Depth to the base of soil development: 38 to 60 inches

Ap or A horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—2 to 3

Chroma—0 or 1

Texture—silty clay loam

AB or BA horizon (where present):

Hue-10YR, 2.5Y, 5Y, or N

Value—2 to 3

Chroma-0 or 1

Texture—silty clay loam

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 to 6

Chroma—0 to 2

Texture—silty clay loam or silty clay

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam, silt loam, or silty clay

330A—Peotone silty clay loam, 0 to 2 percent slopes Setting

Landform: Ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Peotone and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker surface layer
- Soils that have a thinner surface layer
- Soils that have less clay and more silt in the lower part of the profile
- Soils that have silty overwash

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Peotone Soil

Parent material: Colluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 5.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through June

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through June

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

864—Pits, quarry

This map unit consists of nearly level to gently sloping areas from which limestone
has been extracted. The pits have nearly vertical sidewalls. Some pits are active,
and others have been abandoned. Some contain water.

Map Unit Composition

Pits, quarry: 92 percent

Dissimilar components: 8 percent

Components of Minor Extent

Dissimilar components:

- The well drained, loamy Orthents on summits and backslopes
- The poorly drained Faxon soils on toeslopes
- · Bodies of water

865—Pits, gravel

 This map unit consists of nearly level to gently sloping areas from which gravel has been extracted. The pits have nearly vertical sidewalls. Some pits are active, and others have been abandoned. Some contain water.

Map Unit Composition

Pits, gravel: 92 percent

Dissimilar components: 8 percent

Components of Minor Extent

Dissimilar components:

- The well drained, loamy Orthents on summits and backslopes
- The poorly drained Drummer soils on toeslopes

Plano Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls **Taxadjunct features:** The Plano soil in map unit 199C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Plano silt loam, 0 to 2 percent slopes; at an elevation of 715 feet; 1,200 feet south and 1,920 feet east of the northwest corner of sec. 13, T. 12 N., R. 7 E.; Stark County, Illinois; USGS Castleton topographic quadrangle; lat. 41 degrees 01 minute 45 seconds N. and long. 89 degrees 39 minutes 00 seconds W., NAD 27; UTM Zone 16, 277208E and 4545381N, NAD 83:

- Ap—0 to 9 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.
- A—9 to 14 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; many very fine roots; slightly acid; clear smooth boundary.
- Bt1—14 to 19 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; many distinct dark

- brown (10YR 3/3) organo-clay films on faces of peds; slightly acid; clear smooth boundary.
- Bt2—19 to 31 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
- Bt3—31 to 43 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; common distinct very pale brown (10YR 7/3) (dry) silt coatings on faces of peds; few fine faint yellowish brown (10YR 5/4) masses of iron and manganese oxide accumulation in the matrix; slightly acid; clear smooth boundary.
- Bt4—43 to 49 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; few distinct very pale brown (10YR 7/3) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.
- 2Bt5—49 to 53 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure; friable; few fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.
- 2BC—53 to 60 inches; brown (7.5YR 4/4) sandy loam; weak medium subangular blocky structure; very friable; many distinct dark yellowish brown (10YR 3/4) clay bridges; 5 percent gravel; neutral; gradual smooth boundary.
- 2C—60 to 72 inches; stratified yellowish brown (10YR 5/6) and brown (7.5YR 4/4) sandy loam, loam, and loamy sand; massive; friable; 12 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: More than 60 inches

Ap or A horizon:

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

AB or BA horizon (where present):

Hue-10YR

Value—3 or 4

Chroma—2 to 4

Texture—silt loam or silty clay loam

Bt horizon (upper and middle parts):

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silty clay loam

Bt horizon (lower part):

Hue-7.5YR or 10YR

Value—3 to 5

Chroma—2 to 4

Texture—silt loam or silty clay loam

2Bt or 2BC horizon:

Hue—7.5YR or 10YR

Value—3 to 5

Chroma-2 to 6

Texture—silt loam, loam, sandy loam, clay loam, or sandy clay loam Content of gravel—2 to 14 percent

2C horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—3 to 5 Chroma—3 to 6

Texture—stratified loam, loamy sand, sandy loam, or silt loam or the gravelly

analogs of these textures
Content of gravel—3 to 25 percent

199A—Plano silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Plano and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- Soils that have slopes of more than 2 percent
- Soils that are underlain by till
- Soils that have a thinner surface layer
- Soils that are underlain by gravel

Dissimilar soils:

- The somewhat poorly drained Elburn soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Plano Soil

Parent material: Loess over stratified loamy outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

199B—Plano silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and shoulders

Map Unit Composition

Plano and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- · Soils that are moderately eroded
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are less than 40 inches deep to outwash
- · Soils that are more than 60 inches deep to outwash
- · Soils that are underlain by till
- · Soils that are underlain by gravel

Dissimilar soils:

- The somewhat poorly drained Elburn soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Plano Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

199C2—Plano silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Shoulders and backslopes

Map Unit Composition

Plano and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- · Soils that are underlain by till
- Soils that have slopes of less than 5 percent or more than 10 percent
- · Soils that are severely eroded or only slightly eroded
- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- · Soils that are underlain by gravel

Dissimilar soils:

- The somewhat poorly drained Elburn soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Plano Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Proctor Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls **Taxadjunct features:** The Proctor soil in map unit 148C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Proctor silt loam, 2 to 5 percent slopes; at an elevation of 705 feet; 204 feet north and 2,460 feet west of the southeast corner of sec. 3, T. 11 N., R. 6 E.; Peoria County, Illinois; USGS Princeville topographic quadrangle; lat. 40 degrees 57 minutes 37 seconds N. and long. 89 degrees 48 minutes 07 seconds W., NAD 27; UTM Zone 16, 264189E and 4538133N, NAD 83:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine roots; moderately acid; clear smooth boundary.

- A—8 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- Bt1—11 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate very fine subangular blocky structure; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—16 to 23 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate very fine and fine subangular blocky structure; friable; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt3—23 to 28 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- 2Bt4—28 to 33 inches; yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; few very fine roots; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- 2Bt5—33 to 46 inches; strong brown (7.5YR 5/6), stratified loam and sandy loam; weak coarse subangular blocky structure; very friable; few very fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; slightly acid; gradual smooth boundary.
- 2C—46 to 60 inches; strong brown (7.5YR 5/6), stratified sandy loam and loamy sand; massive; very friable; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess or other silty material: 20 to 40 inches Depth to the base of soil development: More than 65 inches

Ap, A, and/or AB horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

Bt and/or BA horizon:

Hue—7.5YR or 10YR

Value—3 to 6

Chroma-3 to 6

Texture—silty clay loam or silt loam

2Bt and/or 2BC horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma—3 to 6

Texture—silt clay loam, silt loam, clay loam, sandy clay loam, loam, or sandy loam Content of gravel—less than 10 percent

2C horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value-4 to 6

Chroma—3 to 6

Texture—sandy loam, loam, or silt loam with thin strata of loamy sand or sand Content of gravel—less than 15 percent

148A—Proctor silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Proctor and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of more than 2 percent
- Soils that are more than 40 inches deep to outwash
- Soils that are underlain by till
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that contain more gravel in the lower part of the profile

Dissimilar soils:

- The somewhat poorly drained Brenton soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Proctor Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

148B—Proctor silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits and shoulders

Map Unit Composition

Proctor and similar soils: 85 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are more than 40 inches deep to outwash
- · Soils that are underlain by till
- Soils that contain more gravel in the lower part of the profile
- Soils that have a seasonal high water table within a depth of 6 feet *Dissimilar soils:*
- The somewhat poorly drained Brenton soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Proctor Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

148C2—Proctor silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Backslopes and shoulders

Map Unit Composition

Proctor and similar soils: 85 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are more than 40 inches deep to outwash
- · Soils that are underlain by till
- · Soils that are severely eroded or only slightly eroded
- Soils that have a seasonal high water table within a depth of 6 feet *Dissimilar soils:*
- The somewhat poorly drained Brenton soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Proctor Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

3800A—Psamments, nearly level, frequently flooded Setting

Landform: Flood plains

Map Unit Composition

Psamments and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more silt and clay in the profile
- Soils that have a seasonal high water table at a depth of less than 4 feet
- Soils that have more gravel throughout the profile

Dissimilar soils:

Poorly drained soils on flood plains

Properties and Qualities of the Psamments

Parent material: Sandy alluvium Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.0 to 0.5 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None

Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: Low

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Rantoul Series

Taxonomic classification: Fine, smectitic, mesic Cumulic Vertic Endoaquolls

Typical Pedon

Rantoul silty clay, 0 to 2 percent slopes; at an elevation of 653 feet; 111 feet south and 1,612 feet east of the northwest corner of sec. 29, T. 30 N., R. 7 E.; Livingston County, Illinois; USGS Dwight topographic quadrangle; lat. 41 degrees 02 minutes 59 seconds N. and long. 88 degrees 27 minutes 04 seconds W., NAD 27; UTM Zone 16, 378046E and 4545293N, NAD 83:

- Ap—0 to 8 inches; black (N 2.5/) silty clay, dark gray (10YR 4/1) dry; moderate fine granular structure; firm; few very fine roots; neutral; abrupt smooth boundary.
- A—8 to 17 inches; black (N 2.5/) silty clay, dark gray (10YR 4/1) dry; moderate medium granular structure; firm; few very fine roots; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; neutral; clear smooth boundary.
- Bg1—17 to 26 inches; very dark gray (10YR 3/1) silty clay, gray (10YR 5/1) dry; strong medium prismatic structure parting to strong fine and medium subangular blocky; firm; few very fine roots; many distinct black (N 2.5/) organic coatings on faces of peds; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; few coarse prominent olive (5Y 4/3) and common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; neutral; clear smooth boundary.
- Bg2—26 to 31 inches; dark gray (5Y 4/1) silty clay; strong medium prismatic structure parting to strong medium subangular blocky; firm; few very fine roots; many distinct very dark gray (5Y 3/1) organic coatings on faces of peds; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; common fine and medium prominent light olive brown (2.5Y 5/6) and yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 2 percent gravel; neutral; clear smooth boundary.
- Bg3—31 to 40 inches; gray (5Y 5/1) silty clay; strong medium prismatic structure parting to strong medium angular blocky; firm; few very fine roots; common distinct dark gray (5Y 4/1) slickensides on faces of peds; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; 2 percent gravel; neutral; clear smooth boundary.
- Bg4—40 to 47 inches; 60 percent gray (5Y 5/1) and 40 percent dark gray (5Y 4/1) silty clay; moderate medium and coarse prismatic structure parting to moderate medium and coarse angular blocky; firm; few very fine roots; common faint dark gray (5Y 4/1) slickensides on faces of peds; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; common

fine prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; 3 percent gravel; slightly alkaline; abrupt smooth boundary.

BCg—47 to 60 inches; 75 percent gray (5Y 5/1) and 25 percent yellowish brown (10YR 5/6) silty clay; weak coarse prismatic structure parting to weak coarse angular blocky; very firm; common faint dark gray (5Y 4/1) slickensides on vertical faces of peds; few fine very dark brown (7.5YR 2/2) very weakly cemented iron and manganese oxide nodules throughout; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Depth to carbonates: 34 to 60 inches

Depth to the base of soil development: 36 to 70 inches

Ap and A horizons:

Hue—10YR or N

Value—2 or 3

Chroma-0 or 1

Texture—silty clay or silty clay loam

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 to 5

Chroma—0 to 2

Texture—silty clay or clay

Content of gravel—less than 7 percent

BCg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6

Texture—silty clay, silty clay loam, or clay Content of gravel—less than 7 percent

Cg horizon:

Hue-10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 to 8

Texture—silty clay, silty clay loam, or clay

Content of gravel—less than 7 percent

238A—Rantoul silty clay, 0 to 2 percent slopes

Setting

Landform: Lake plains and ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Rantoul and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thicker surface layer
- Soils that have less clay and more silt in the control section

- Soils that are more than 20 inches deep to till
- Soils that have 6 to 12 inches of silty overwash

Dissimilar soils:

The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Rantoul Soil

Parent material: Colluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through June

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through June

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Not prime farmland

Hydric soil status: Hydric

Ridgeville Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Ridgeville fine sandy loam, 0 to 2 percent slopes; at an elevation of 653 feet; 2,084 feet south and 30 feet east of the northwest corner of sec. 19, T. 26 N., R. 12 W.; Iroquois County, Illinois; USGS Woodworth topographic quadrangle; lat. 40 degrees 43 minutes 22 seconds N. and long. 87 degrees 45 minutes 55 seconds W., NAD 27; UTM Zone 16, 435373E and 4508331N, NAD 83:

- Ap—0 to 8 inches; very dark brown (10YR 2/2) fine sandy loam, dark grayish brown (10YR 4/2) dry; weak fine and medium granular structure; very friable; slightly acid; gradual smooth boundary.
- A—8 to 16 inches; very dark gray (10YR 3/1) fine sandy loam, dark grayish brown (10YR 4/2) dry; weak fine and medium granular structure; very friable; moderately acid; clear wavy boundary.
- BA—16 to 25 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium granular structure in the upper 4 inches grading to weak very fine and fine subangular blocky in the lower part; friable; common fine faint brown (10YR 5/3) masses of iron accumulation and dark gray (10YR 4/1) iron depletions in the matrix; moderately acid; clear smooth boundary.
- Bt1—25 to 32 inches; grayish brown (10YR 5/2) sandy clay loam; moderate fine and medium subangular blocky structure; firm; few distinct gray (10YR 5/1) clay films

on faces of peds; few fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

- Bt2—32 to 40 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium subangular blocky structure; friable; common distinct gray (10YR 5/1) clay films on faces of peds; many fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly acid; clear wavy boundary.
- BC—40 to 47 inches; yellowish brown (10YR 5/8) loamy fine sand; weak medium subangular blocky structure; very friable; few fine dark brown (7.5YR 3/2) iron and manganese oxide concretions throughout; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; neutral; clear wavy boundary.
- Cg—47 to 60 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches Depth to the base of soil development: 35 to 55 inches

Ap and A horizons:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—fine sandy loam or loam

BA horizon (where present):

Hue—10YR

Value—3 or 4

Chroma-2 or 3

Texture—fine sandy loam or loam

Bt horizon:

Hue—10YR

Value—4 or 5

Chroma-2 to 4

Texture—sandy loam, loam, sandy clay loam, or fine sandy loam

BC horizon (where present):

Hue-7.5YR or 10YR

Value-4 to 6

Chroma-2 to 8

Texture—fine sand, loamy sand, or loamy fine sand

Content of gravel—less than 7 percent

Cg or C horizon:

Hue-7.5YR or 10YR

Value-4 to 6

Chroma-2 to 8

Texture—fine sand or sand; thin strata of loamy fine sand, sandy loam, loam, coarse sand, and fine gravel in some pedons

Content of gravel—less than 7 percent

151A—Ridgeville fine sandy loam, 0 to 2 percent slopes Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and footslopes

Map Unit Composition

Ridgeville and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less sand in the profile
- Soils that have a thinner surface layer
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- · The well drained Dickinson soils on summits
- · Soils that are subject to flooding

Properties and Qualities of the Ridgeville Soil

Parent material: Eolian deposits and/or outwash Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

151B—Ridgeville fine sandy loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Backslopes and footslopes

Map Unit Composition

Ridgeville and similar soils: 85 percent

Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less sand in the profile
- Soils that are moderately eroded
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- · The well drained Dickinson soils on summits
- · Soils that are subject to flooding

Properties and Qualities of the Ridgeville Soil

Parent material: Eolian deposits and/or outwash Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

8151A—Ridgeville fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Ridgeville and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have more clay and less sand in the profile
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent

Dissimilar soils:

- The well drained, occasionally flooded Ross soils in the higher positions on flood plains
- Soils that are not subject to flooding

Properties and Qualities of the Ridgeville Soil

Parent material: Outwash and/or alluvium Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 1 to 2 feet, January through May

Ponding: None

Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low

Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Ritchey Series

Taxonomic classification: Loamy, mixed, superactive, mesic Lithic Hapludalfs

Typical Pedon

Ritchey silt loam, 2 to 4 percent slopes; at an elevation of 595 feet; Shaw-Waw-Nas-See Reservation, T. 31 N., R. 11 E.; Kankakee County, Illinois; USGS Bourbonnais topographic quadrangle; lat. 41 degrees 12 minutes 14 seconds N. and long. 87 degrees 58 minutes 49 seconds W., NAD 27; UTM Zone 16, 417813E and 4561873N, NAD 83:

- A—0 to 5 inches; very dark grayish brown (10YR 3/2) silt loam, gray (10YR 5/1) dry; weak fine granular structure; friable; many very fine roots; neutral; abrupt smooth boundary.
- E—5 to 9 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate medium platy structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on horizontal faces of peds; neutral; clear smooth boundary.
- Bt1—9 to 12 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

Bt2—12 to 17 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; very few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; common fine faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; 1 percent gravel; slightly alkaline; clear smooth boundary.

2R—17 to 60 inches; very pale brown (10YR 8/4) limestone bedrock.

Range in Characteristics

Depth to bedrock: 10 to 20 inches

Depth to the base of soil development: 10 to 20 inches

A or Ap horizon:

Hue-10YR

Value—2 to 4

Chroma-2 or 3

Texture—silt loam, loam, or silty clay loam

Content of gravel—less than 10 percent

E horizon (where present):

Hue—10YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam or loam

Content of gravel—less than 10 percent

Bt horizon:

Hue-10YR, 7.5YR, or 5YR

Value—3 to 6

Chroma-3 to 5

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—less than 10 percent

BC horizon (where present):

Hue—10YR, 7.5YR, or 5YR

Value-4 to 6

Chroma-3 to 5

Texture—loam, clay loam, silt loam, or silty clay loam or the gravelly analogs of

these textures

Content of gravel—less than 35 percent

311B—Ritchey silt loam, 2 to 4 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Backslopes and summits

Map Unit Composition

Ritchey and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have bedrock at a depth of less than 10 inches or more than 20 inches
- Soils that have slopes of less than 2 percent or more than 4 percent

Dissimilar soils:

• Shallow, somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Ritchey Soil

Parent material: Till over dolostone or limestone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic) Available water capacity: About 3.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

794G—Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Backslopes

Map Unit Composition

Marseilles and similar soils: 30 percent Northfield and similar soils: 30 percent Ritchey and similar soils: 30 percent Dissimilar components: 10 percent

Components of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have bedrock at various depths
- Soils that have carbonates in the surface layer
- Soils that have slopes of less than 30 percent or more than 60 percent *Dissimilar components:*
- Strongly sloping soils on backslopes
- Areas of rock outcrop
- Areas that have extreme vertical slopes

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum derived from shale

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic) Available water capacity: About 5.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Northfield Soil

Parent material: Drift over sandstone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)

Available water capacity: About 2.9 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Ritchey Soil

Parent material: Till over dolostone or limestone

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)

Available water capacity: About 3.5 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—8; Northfield—8; Ritchey—8

Prime farmland category: Not prime farmland

Hydric soil status: Marseilles—not hydric; Northfield—not hydric; Ritchey—not hydric

Rodman Series

Taxonomic classification: Sandy-skeletal, mixed, mesic Typic Hapludolls

Typical Pedon

Rodman gravelly loam, in an area of Casco-Rodman complex, 20 to 30 percent slopes; at an elevation of 750 feet; 500 feet south and 2,600 feet east of the northwest corner of sec. 7, T. 44 N., R. 9 E.; McHenry County, Illinois; USGS Wauconda topographic quadrangle; lat. 42 degrees 18 minutes 45 seconds N. and long. 88 degrees 13 minutes 43 seconds W., NAD 27; UTM Zone 16, 398741E and 4685207N, NAD 83:

- A—0 to 11 inches; very dark gray (10YR 3/1) gravelly loam, dark grayish brown (10YR 4/2) dry; strong fine and medium granular structure; friable; many very fine and fine roots; 17 percent gravel; neutral; clear wavy boundary.
- Bw—11 to 14 inches; 50 percent dark brown (10YR 3/3) and 50 percent brown (10YR 4/3) gravelly loam; weak fine granular structure; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; 25 percent gravel; strongly effervescent; slightly alkaline; abrupt wavy boundary.
- C—14 to 60 inches; dark yellowish brown (10YR 4/4) very gravelly sand and very gravelly loamy sand; single grain; loose; common very fine roots; 50 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 15 inches

Depth to carbonates: 10 to 20 inches

Depth to the base of soil development: 10 to 20 inches

A horizon:

Hue—7.5YR or 10YR

Value—2 or 3

Chroma—1 or 2

Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam

Content of gravel—10 to 30 percent

Bw horizon:

Hue-7.5YR or 10YR

Value—2 to 4

Chroma—1 to 3

Texture—loam or sandy loam or the gravelly or very gravelly analogs of these textures

Content of gravel—10 to 40 percent

C horizon:

Hue-10YR

Value—3 to 6

Chroma—1 to 4

Texture—the very gravelly or extremely gravelly analogs of loamy sand, sand, loamy coarse sand, or coarse sand

Content of gravel—35 to 78 percent

969E2—Casco-Rodman complex, 12 to 20 percent slopes, eroded

Setting

Landform: Kames, outwash plains, and end moraines

Position on the landform: Backslopes

Map Unit Composition

Casco and similar soils: 50 percent Rodman and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

• Soils that are severely eroded or only slightly eroded

- Soils that are more than 20 inches deep to sandy and gravelly deposits
- Soils that have carbonates at or near the surface
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 12 percent or more than 20 percent *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Rodman Soil

Parent material: Sandy and gravelly glaciofluvial deposits

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 2.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Low

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: High Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Casco—6e; Rodman—6s

Prime farmland category: Not prime farmland

Hydric soil status: Casco—not hydric; Rodman—not hydric

969F—Casco-Rodman complex, 20 to 30 percent slopes

Setting

Landform: Kames, outwash plains, and end moraines

Position on the landform: Backslopes

Map Unit Composition

Casco and similar soils: 50 percent Rodman and similar soils: 40 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that are more than 20 inches deep to sandy and gravelly deposits
- Soils that have carbonates at or near the surface
- Soils that have till in the lower part of the profile
- Soils that have slopes of less than 20 percent or more than 30 percent *Dissimilar soils:*
- Severely eroded soils on shoulders and backslopes
- · Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Casco Soil

Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 3.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Properties and Qualities of the Rodman Soil

Parent material: Sandy and gravelly glaciofluvial deposits

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 2.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Low

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Casco—7e; Rodman—7s

Prime farmland category: Not prime farmland

Hydric soil status: Casco—not hydric; Rodman—not hydric

Rooks Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Rooks silty clay loam, 0 to 2 percent slopes; at an elevation of 655 feet; 390 feet east and 2,350 feet south of the northwest corner of sec. 18, T. 29 N., R. 3 E.; Livingston County, Illinois; USGS Dana topographic quadrangle; lat. 40 degrees 58 minutes 47 seconds N. and long. 88 degrees 55 minutes 46 seconds W., UTM Zone 16, 337675E and 4538315N, NAD 83:

- Ap—0 to 9 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; common fine roots; neutral; abrupt smooth boundary.
- AB—9 to 15 inches; very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; few very fine roots; many faint black (10YR 2/1) organic coatings on faces of peds; neutral; clear smooth boundary.
- Bt1—15 to 22 inches; brown (10YR 4/3) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; few faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt2—22 to 30 inches; grayish brown (10YR 5/2) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; few faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix;

- common fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; clear smooth boundary.
- 2Btk1—30 to 38 inches; grayish brown (10YR 5/2) silt loam; weak medium prismatic structure parting to weak fine angular blocky; friable; few very fine roots; few faint gray (10YR 5/1) clay films on faces of peds; few fine black (7.5YR 2.5/1) soft masses of iron and manganese oxide accumulations throughout; common fine light gray (10YR 7/2) moderately cemented calcium carbonate concretions throughout; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2Btk2—38 to 45 inches; gray (10YR 6/1) and yellowish brown (10YR 5/6) silty clay loam; weak medium prismatic structure; friable; common faint gray (10YR 5/1) clay films on faces of peds; few fine black (7.5YR 2.5/1) soft masses of iron and manganese oxide accumulations throughout; common fine gray (10YR 7/2) moderately cemented calcium carbonate concretions throughout; strongly effervescent; moderately alkaline; clear smooth boundary.
- 3BCk—45 to 51 inches; grayish brown (2.5Y 5/2) and light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure; firm; common faint gray (10YR 5/1) pressure faces on vertical faces of peds; common medium gray (10YR 7/2) moderately cemented calcium carbonate concretions throughout; 1 percent gravel; strongly effervescent; moderately alkaline; clear smooth boundary.
- 3C—51 to 70 inches; grayish brown (2.5Y 5/2) and light olive brown (2.5Y 5/4) silty clay loam; massive; firm; many faint gray (2.5Y 5/1) pressure faces on vertical cleavage planes; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 25 to 40 inches

Depth to carbonates: 25 to 40 inches

Depth to the base of soil development: 40 to 55 inches

Ap. A. or AB horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silty clay loam or silt loam

Bt horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma-2 to 6

Texture—silty clay loam or silty clay

2Btk horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 6

Texture—silt loam, silty clay loam, or loam

3BCk or 3C horizon:

Hue—10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 to 6

Texture—silty clay loam or silty clay

Content of gravel—1 to 5 percent

542A—Rooks silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits and footslopes

Map Unit Composition

Rooks and similar soils: 93 percent

Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:

- Soils that do not contain till within a depth of 60 inches
- Soils that have more clay and less silt in the profile
- Soils that are less calcareous in the subsoil
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Hartsburg soils on toeslopes

Properties and Qualities of the Rooks Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

542B—Rooks silty clay loam, 2 to 5 percent slopes Setting

Landform: Ground moraines

Position on the landform: Footslopes and backslopes

Map Unit Composition

Rooks and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that do not contain till within a depth of 60 inches
- Soils that have more clay and less silt in the profile
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are less calcareous in the subsoil
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The poorly drained Hartsburg soils on toeslopes

Properties and Qualities of the Rooks Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Ross Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Ross loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 584 feet; 2,030 feet east and 550 feet north of the southwest corner of sec. 7, T. 30 N., R. 4 E.; Livingston County, Illinois; USGS Streator South topographic quadrangle; lat. 41 degrees 04 minutes 40 seconds N. and long. 88 degrees 48 minutes 21 seconds W., NAD 27; UTM Zone 16, 348290E and 4548953N, NAD 83:

Ap—0 to 8 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.

A1—8 to 14 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; few very fine roots; neutral; clear smooth boundary.

- A2—14 to 23 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; few very fine roots; many faint very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- BA—23 to 33 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine prismatic structure parting to weak medium angular blocky; friable; few very fine roots; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- Bw1—33 to 41 inches; dark brown (10YR 4/3) loam; weak fine prismatic structure; friable; few very fine roots; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
- Bw2—41 to 54 inches; dark brown (10YR 4/3) loam; weak medium prismatic structure; friable; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine black (7.5YR 2.5/1) iron and manganese oxide accumulations throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few medium faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.
- C—54 to 60 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; friable; few fine black (7.5YR 2.5/1) iron and manganese oxide accumulations throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches

Depth to carbonates: 24 to 45 inches

Depth to the base of soil development: 24 to 45 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—loam, silt loam, or sandy loam Content of gravel—less than 5 percent

B horizon:

Hue-10YR

Value—2 to 5

Chroma—1 to 4

Texture—loam, silt loam, or sandy loam

Content of gravel—less than 10 percent

C horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value-4 to 6

Chroma—1 to 4

Texture—sandy loam, loam, silt loam, or sandy clay loam or the gravelly analogs of these textures

Content of gravel—less than 35 percent

3073A—Ross loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Ross and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner or lighter colored surface layer
- Soils that have more clay and less sand in the surface layer
- · Soils that have more sand and less clay throughout
- Soils that have a seasonal high water table at a depth of less than 4 feet Dissimilar soils:
- Somewhat poorly drained and poorly drained soils on flood plains
- · Soils that are not subject to flooding

Properties and Qualities of the Ross Soil

Parent material: Loamy alluvium Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet, February through April

Ponding: None

Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where protected from flooding or not

frequently flooded during the growing season

Hydric soil status: Not hydric

7073A—Ross silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood plains

Map Unit Composition

Ross and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

• Soils that have a thinner or lighter colored surface layer

- Soils that have more clay and less sand in the surface layer
- Soils that have more sand and less clay throughout
- Soils that have a seasonal high water table at a depth of less than 4 feet Dissimilar soils:
- Somewhat poorly drained and poorly drained soils on flood plains
- Soils that are not subject to flooding

Properties and Qualities of the Ross Soil

Parent material: Loamy alluvium Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet, February through April

Ponding: None

Frequency and most likely period of flooding: Rare, November through June

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

8073A—Ross loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Ross and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner or lighter colored surface layer
- Soils that have more clay and less sand in the surface layer

- Soils that have more sand and less clay throughout
- Soils that have a seasonal high water table at a depth of less than 4 feet *Dissimilar soils:*
- The somewhat poorly drained, occasionally flooded Ridgeville soils on flood plains
- Poorly drained soils on flood plains
- Soils that are not subject to flooding

Properties and Qualities of the Ross Soil

Parent material: Loamy alluvium Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet, February through April

Ponding: None

Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Rozetta Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Rozetta silt loam, 2 to 5 percent slopes; at an elevation of 605 feet; 2,574 feet west and 429 feet north of the southeast corner of sec. 15, T. 4 N., R. 2 E.; Fulton County, Illinois; USGS Ipava topographic quadrangle; lat. 40 degrees 19 minutes 14 seconds N. and long. 90 degrees 15 minutes 59 seconds W., NAD 27; UTM Zone 15, 732250E and 4466929N, NAD 83:

- Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak very fine granular structure; friable; common very fine and few fine roots; neutral; clear smooth boundary.
- E—7 to 11 inches; brown (10YR 4/3) silt loam; weak medium platy structure parting to weak very fine subangular blocky; friable; common very fine roots; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; neutral; clear smooth boundary.
- Bt1—11 to 19 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine black (10YR 2/1) manganese oxide

concretions with sharp boundaries in ped interiors; moderately acid; clear smooth boundary.

- Bt2—19 to 29 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine black (10YR 2/1) manganese oxide concretions with sharp boundaries in ped interiors; few fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; moderately acid; gradual smooth boundary.
- Bt3—29 to 39 inches; 80 percent yellowish brown (10YR 5/4), 15 percent yellowish brown (10YR 5/6), and 5 percent pale brown (10YR 6/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine black (10YR 2/1) manganese oxide concretions with sharp boundaries in ped interiors; few fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- Bt4—39 to 45 inches; 60 percent yellowish brown (10YR 5/4), 20 percent yellowish brown (10YR 5/6), and 20 percent pale brown (10YR 6/3) silty clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; friable; few very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine black (10YR 2/1) manganese oxide concretions with sharp boundaries in ped interiors; few fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; moderately acid; gradual smooth boundary.
- BC—45 to 55 inches; 70 percent yellowish brown (10YR 5/4) and 30 percent yellowish brown (10YR 5/6) silty clay loam; weak coarse prismatic structure; friable; few very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine black (10YR 2/1) manganese oxide concretions with sharp boundaries in ped interiors; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions along root channels and pores; moderately acid; gradual smooth boundary.
- C—55 to 60 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; few very fine roots; few fine black (10YR 2/1) manganese oxide concretions with sharp boundaries in ped interiors; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; light brownish gray (10YR 6/2) iron depletions along pores; moderately acid.

Range in Characteristics

Depth to carbonates: 42 to more than 72 inches

Ap or A horizon:

Hue—10YR

Value—3 to 5

Chroma-1 to 3

Texture—silt loam or silty clay loam

E horizon:

Hue—10YR

Value—4 to 6

Chroma-2 or 3

Texture—silt loam

Bt horizon:

Hue-10YR or 7.5YR

Value—4 to 6 Chroma—3 to 6 Texture—silty clay loam

C horizon:

Hue—10YR Value—4 to 6 Chroma—2 to 6 Texture—silt loam or silty clay loam

279B—Rozetta silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Shoulders and summits

Map Unit Composition

Rozetta and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- Soils that have till within a depth of 60 inches
- · Soils that have a seasonal high water table at a depth of less than 4 feet
- · Soils that have a thicker and darker surface layer
- Soils that are moderately eroded

Dissimilar soils:

- The somewhat poorly drained Stronghurst soils on summits
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 4 to 6 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Rush Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Rush silt loam, 0 to 2 percent slopes; at an elevation of 712 feet; 175 feet south and 470 feet west of the northeast corner of sec. 15, T. 39 N., R. 8 E.; Kane County, Illinois; USGS Aurora North topographic quadrangle; lat. 41 degrees 52 minutes 08 seconds N. and long. 88 degrees 18 minutes 13 seconds W., NAD 27; UTM Zone 16, 391822E and 4636036N, NAD 83:

- A—0 to 4 inches; very dark gray (10YR 3/1) silt loam, brown (10YR 5/3) dry; weak very fine granular structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.
- E—4 to 11 inches; 60 percent dark grayish brown (10YR 4/2) and 40 percent brown (10YR 4/3) silt loam, light brownish gray (10YR 6/2) dry; weak thick platy structure; friable; common very fine roots; strongly acid; abrupt smooth boundary.
- Bt1—11 to 18 inches; 55 percent brown (10YR 4/3) and 45 percent dark yellowish brown (10YR 4/4) silty clay loam; moderate very fine subangular blocky structure; friable; common very fine roots; few distinct dark brown (10YR 3/3) clay films on faces of peds; strongly acid; clear smooth boundary.
- Bt2—18 to 24 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt3—24 to 32 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
- Bt4—32 to 38 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate coarse subangular blocky structure; firm; few very fine roots; few distinct brown (10YR 4/3) and dark brown (10YR 3/3) clay films on faces of peds; slightly acid; abrupt smooth boundary.
- 2Bt5—38 to 45 inches; dark yellowish brown (10YR 4/4) clay loam; weak coarse subangular blocky structure; firm; few very fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; 12 percent gravel; slightly acid; abrupt smooth boundary.
- 3C—45 to 60 inches; yellowish brown (10YR 5/4) gravelly sand; single grain; loose; 25 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 24 to 40 inches Depth to sandy and gravelly deposits: 40 to 60 inches Depth to carbonates: 40 to 60 inches Depth to the base of soil development: 40 to 80 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 3
Texture—silt loam

E horizon (where present):

Hue—10YR Value—4 or 5 Chroma—2 to 4 Texture—silt loam

Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt horizon:

Hue-5YR, 7.5YR, or 10YR

Value—4 or 5

Chroma-3 to 6

Texture—clay loam, loam, or sandy clay loam or the gravelly analogs of these

Content of gravel—less than 20 percent

3Bt horizon (where present):

Hue—5YR, 7.5YR, or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—the gravelly or very gravelly analogs of loam, sandy clay loam, or sandy loam

Content of gravel—15 to 25 percent

3BC horizon (where present):

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—4 to 6

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sandy loam, coarse sandy loam, or loamy coarse sand

Content of gravel—15 to 75 percent

3C horizon:

Hue—10YR

Value—5 or 6

Chroma—2 to 4

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand

Content of gravel-15 to 75 percent

791A—Rush silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Rush and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of less than 6 feet
- · Soils that have a thicker and darker surface layer
- Soils that have less gravel in the lower part of the profile

 Soils that have sandy or gravelly deposits at a depth of less than 40 inches or more than 60 inches

Soils that have slopes of more than 2 percent

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Rush Soil

Parent material: Loess or other silty material and the underlying loamy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

791B—Rush silt loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Rush and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of less than 6 feet
- Soils that have sandy or gravelly deposits at a depth of less than 40 inches or more than 60 inches
- Soils that have a thicker and darker surface layer
- Soils that have less gravel in the lower part of the profile
- Soils that have slopes of less than 2 percent or more than 4 percent

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Rush Soil

Parent material: Loess or other silty material and the underlying loamy and gravelly outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Rutland Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Taxadjunct features: The Rutland soil in map unit 375B2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine, smectitic, mesic Aquollic Hapludalf.

Typical Pedon

Rutland silty clay loam, 0 to 2 percent slopes; at an elevation of 730 feet; 168 feet north and 480 feet east of the southwest corner of sec. 34, T. 28 N., R. 2 E.; Woodford County, Illinois; USGS Flanagan SW topographic quadrangle; lat. 40 degrees 50 minutes 23 seconds N. and long. 88 degrees 59 minutes 10 seconds W., NAD 27; UTM Zone 16, 332550E and 4522867N, NAD 83:

- Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, very dark grayish brown (10YR 3/2) dry; weak very fine granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.
- A—8 to 14 inches; black (10YR 2/1) silty clay loam, very dark grayish brown (10YR 3/2) dry; moderate fine granular structure; friable; common fine roots; moderately acid; clear wavy boundary.
- Bt1—14 to 20 inches; brown (10YR 4/3) silty clay; strong fine subangular blocky structure; friable; common fine roots; many distinct very dark grayish brown (10YR 3/2) organic coatings and common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; few fine faint grayish brown (2.5Y 5/2) iron depletions in the matrix; moderately acid; gradual wavy boundary.
- Bt2—20 to 28 inches; olive brown (2.5Y 4/4) silty clay loam; moderate fine prismatic structure parting to strong fine subangular blocky; firm; common fine roots; many

distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.

- Bt3—28 to 36 inches; olive brown (2.5Y 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.
- Bt4—36 to 44 inches; yellowish brown (10YR 5/6) and light brownish gray (2.5Y 6/2) silt loam; moderate medium and coarse prismatic structure; firm; few very fine roots; many distinct grayish brown (2.5Y 5/2) clay films on faces of peds; neutral; clear wavy boundary.
- 2Bk—44 to 52 inches; olive brown (2.5Y 4/4) silty clay; moderate coarse prismatic structure; very firm; many distinct light brownish gray (2.5Y 6/2) calcium carbonate coatings along vertical faces of peds; common medium light gray (10YR 7/2) soft masses of calcium carbonate throughout; 1 percent gravel; strongly effervescent; moderately alkaline; diffuse wavy boundary.
- 2Cd—52 to 60 inches; olive brown (2.5Y 4/4) clay; massive; very firm; many distinct light brownish gray (2.5Y 6/2) calcium carbonate coatings along vertical cleavage planes; 1 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 35 to 55 inches

Depth to carbonates: 30 to 50 inches

Depth to the base of soil development: 40 to 60 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silty clay loam or silt loam

Bt horizon:

Hue-10YR or 2.5Y

Value—3 to 6

Chroma—1 to 4

Texture—silty clay loam, silt loam, or silty clay

2Bt, 2BC, or 2Bk horizon:

Hue—10YR to 5G

Value—4 to 6

Chroma—1 to 6

Texture—silty clay or clay

2Cd horizon:

Hue—10YR to 5G

Value—4 to 6

Chroma—1 to 6

Texture—silty clay or clay

375A—Rutland silty clay loam, 0 to 2 percent slopes Setting

Landform: Ground moraines and lake plains
Position on the landform: Summits and footslopes

Map Unit Composition

Rutland and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that are less than 35 inches deep to till
- Soils that are more than 60 inches deep to till
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Streator soils on toeslopes

Properties and Qualities of the Rutland Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 60 inches to dense material Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet, January through May

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Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

375B—Rutland silty clay loam, 2 to 5 percent slopes Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes and footslopes

Map Unit Composition

Rutland and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

• Soils that have less clay and more silt in the control section

- Soils that are less than 35 inches deep to till
- · Soils that are more than 60 inches deep to till
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The poorly drained Streator soils on toeslopes

Properties and Qualities of the Rutland Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 60 inches to dense material Available water capacity: About 9.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 4.5 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

375B2—Rutland silty clay loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes and footslopes

Map Unit Composition

Rutland and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that are less than 35 inches deep to till
- · Soils that are more than 60 inches deep to till
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are severely eroded or only slightly eroded
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- The poorly drained Streator soils on toeslopes

Properties and Qualities of the Rutland Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 60 inches to dense material Available water capacity: About 8.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Sabina Series

Taxonomic classification: Fine, smectitic, mesic Aeric Epiaqualfs

Typical Pedon

Sabina silt loam, 0 to 2 percent slopes; at an elevation of 665 feet; 1,785 feet north and 36 feet east of the southwest corner of sec. 13, T. 16 N., R. 7 E.; Douglas County, Illinois; USGS Tuscola topographic quadrangle; lat. 39 degrees 50 minutes 24.6 seconds N. and long. 88 degrees 22 minutes 05 seconds W.; UTM Zone 16, 382947E and 4410701N, NAD 27:

- Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate very fine granular structure; friable; strongly acid; abrupt smooth boundary.
- E—8 to 12 inches; grayish brown (10YR 5/2) silt loam; moderate fine granular structure; friable; few fine black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; strongly acid; clear smooth boundary.

BE—12 to 16 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate very fine subangular blocky structure; firm; few fine black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; common fine distinct dark grayish brown (2.5Y 4/2) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

- Btg1—16 to 25 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; many distinct dark gray (10YR 4/1) clay films on faces of peds; few fine black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/4) masses of iron and manganese accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg2—25 to 37 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium subangular blocky structure; firm; many prominent very dark gray (10YR 3/1) organo-clay films on faces of peds; few fine black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; few fine distinct yellowish brown (10YR 5/4) masses of iron and manganese accumulation in the matrix; slightly acid; clear smooth boundary.
- Bt1—37 to 43 inches; light olive brown (2.5Y 5/4) silty clay loam; weak and moderate medium and coarse subangular blocky structure; firm; common prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.
- 2Bt2—43 to 50 inches; variegated yellowish brown (10YR 5/4), light olive brown (2.5Y 5/4), and dark grayish brown (10YR 4/2) clay loam; weak coarse subangular blocky structure; firm; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; 2 percent gravel; neutral; gradual irregular boundary.
- 2Cd—50 to 80 inches; light olive brown (2.5Y 5/3) loam; massive; very firm; common medium black (7.5YR 2.5/1) moderately cemented iron and manganese oxide concretions throughout; common medium white (10YR 8/1) very weakly cemented calcium carbonate nodules throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct gray (10YR 6/1) iron depletions in the matrix; 7 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 40 to 60 inches Depth to carbonates: 40 to 75 inches

Ap or A horizon:

Hue—10YR

Value—3 to 5

Chroma—2

Texture—silt loam

E horizon (where present):

Hue-10YR

Value—4 or 5

Chroma—1 to 3

Texture—silt loam

BE horizon (where present):

Hue—10YR or 2.5Y

Value—4 or 5

Chroma—2 to 4

Texture—silt loam or silty clay loam

Bt or Btg horizon:

Hue—10YR or 2.5Y

Value—4 or 5

Chroma-2 to 4

Texture—silty clay loam or silty clay

2Bt, 2Btg, or 2BC horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—2 to 4

Texture—clay loam, loam, silty clay loam, or silt loam

Content of gravel—less than 5 percent

2C, 2Cg, 2Cdg, or 2Cd horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma-2 to 4

Texture—clay loam, loam, silty clay loam, or silt loam

Content of gravel—less than 10 percent

236A—Sabina silt loam, 0 to 2 percent slopes

Setting

Landform: Till plains and ground moraines

Position on the landform: Summits and footslopes

Map Unit Composition

Sabina and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent
- Soils that have a thicker and darker surface layer
- Soils that are more than 60 inches deep to till

Dissimilar soils:

The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Sabina Soil

Parent material: Loess over loamy till Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow Depth to restrictive feature: 48 to 80 inches to dense material Available water capacity: About 9.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

Sable Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Sable silty clay loam, 0 to 2 percent slopes; at an elevation of 732 feet; 1,281 feet south and 97 feet west of the northeast corner of sec. 14, T. 9 N., R. 3 W.; Warren County, Illinois; USGS Kirkwood East topographic quadrangle; lat. 40 degrees 46 minutes 22.4 seconds N. and long. 90 degrees 41 minutes 33.7 seconds W., NAD 27; UTM Zone 15, 694708E and 4516110N, NAD 83:

- Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; firm; moderately acid; abrupt smooth boundary.
- A—8 to 19 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate very fine angular blocky structure; firm; few fine dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; slightly acid; clear smooth boundary.
- AB—19 to 23 inches; very dark gray (10YR 3/1) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine angular blocky structure; firm; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; slightly acid; clear smooth boundary.
- Bg—23 to 29 inches; dark gray (10YR 4/1) silty clay loam; moderate fine and medium subangular blocky structure; firm; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; common fine and medium dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; common medium distinct brown (10YR 5/3) masses of iron accumulation in the matrix; few medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Btg1—29 to 38 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few distinct dark gray (10YR 4/1) clay films on faces of peds; many fine and medium dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.
- Btg2—38 to 47 inches; gray (N 5/) silt loam; weak medium prismatic structure parting to weak medium and coarse angular blocky; firm; few prominent grayish brown (10YR 5/2) clay films on faces of prisms; common fine dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; gradual smooth boundary.

Cg—47 to 60 inches; gray (N 5/) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches Depth to the base of soil development: 40 to 60 inches

Ap or A horizon:

Hue-10YR, 5Y, or N

Value—2 or 3

Chroma—0 or 1

Texture—silty clay loam or silt loam

AB or BA horizon (where present):

Hue-10YR, 5Y, or N

Value—2 or 3

Chroma—0 or 1

Texture—silty clay loam

Bg, Btg, BC, or BCg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—3 to 6

Chroma—0 to 2

Texture—silty clay loam or silt loam

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—3 to 6

Chroma—0 to 2

Texture—silt loam or silty clay loam

68A—Sable silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Sable and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have till or outwash in the lower part of the profile
- Soils that have 6 to 12 inches of silty overwash
- Soils that have carbonates in the surface layer

Dissimilar soils:

- The somewhat poorly drained Arrowsmith and Muscatune soils on summits
- The poorly drained Spaulding soils on toeslopes

Properties and Qualities of the Sable Soil

Parent material: Loess

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 5.0 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Sawmill Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon

Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 636 feet; 1,350 feet south and 140 feet west of the northeast corner of sec. 31, T. 30 N., R. 3 E.; Livingston County, Illinois; USGS Long Point topographic quadrangle; lat. 41 degrees 01 minute 36 seconds N. and long. 88 degrees 54 minutes 43 seconds W., NAD 27; UTM Zone 16, 339248E and 4543492N, NAD 83:

- Ap—0 to 9 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; few very fine roots; slightly acid; abrupt smooth boundary.
- A1—9 to 17 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.
- A2—17 to 24 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; few very fine roots; 1 percent gravel; neutral; clear smooth boundary.
- A3—24 to 29 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak medium prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; 1 percent gravel; neutral; clear smooth boundary.
- Bg1—29 to 36 inches; dark gray (5Y 4/1) silty clay loam; weak medium prismatic structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; 1 percent gravel; neutral; clear smooth boundary.
- Bg2—36 to 41 inches; dark gray (5Y 4/1) silty clay loam; weak medium prismatic structure; friable; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; 1 percent gravel; neutral; clear smooth boundary.

- BCg—41 to 48 inches; dark gray (5Y 4/1) silty clay loam; very weak medium prismatic structure; firm; few very fine roots; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; few fine prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; 1 percent gravel; neutral; abrupt smooth boundary.
- Cg—48 to 60 inches; 60 percent gray (10YR 5/1) and 40 percent brownish yellow (10YR 6/6) silt loam; massive; firm; few fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; 1 percent gravel; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

Depth to carbonates: More than 48 inches

Depth to the base of soil development: 36 to 60 inches

Ap, A, and/or AB horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—2 or 3

Chroma—0 to 2

Texture—silty clay loam

Content of gravel—less than 5 percent

Bg, Btg, or BCg horizon:

Hue-10YR, 2.5Y, or 5Y

Value—3 to 6

Chroma—1 or 2

Texture—silty clay loam

Content of gravel—less than 5 percent

Cg horizon:

Hue-10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 or 2

Texture—silty clay loam or clay loam with strata of loam, silt loam, or sandy loam Content of gravel—less than 10 percent

3107A—Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Sawmill and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner subsurface layer
- Soils that have less clay and more silt in the control section
- Soils that are overlain by light-colored, recent deposits
- Soils that have more gravel in the lower part of the profile

Dissimilar soils:

• The poorly drained Millington soils on flood plains

• Somewhat poorly drained soils in slightly higher positions on flood plains

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Frequent, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained and either protected from

flooding or not frequently flooded during the growing season

Hydric soil status: Hydric

8107A—Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Sawmill and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a thinner subsurface layer
- Soils that have less clay and more silt in the control section
- Soils that are overlain by light-colored, recent deposits
- Soils that have more gravel in the lower part of the profile

Dissimilar soils:

Somewhat poorly drained soils in slightly higher positions on flood plains

Properties and Qualities of the Sawmill Soil

Parent material: Silty alluvium Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to 1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Selma Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Selma loam, 0 to 2 percent slopes; at an elevation of 656 feet; 52 feet south and 160 feet west of the northeast corner of sec. 18, T. 28 N., R. 10 E.; Iroquois County, Illinois; USGS Piper City NE topographic quadrangle; lat. 40 degrees 54 minutes 36 seconds N. and long. 88 degrees 06 minutes 44 seconds W., NAD 27; UTM Zone 16, 406337E and 4529366N, NAD 83:

- Ap—0 to 6 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; gradual smooth boundary.
- A—6 to 13 inches; black (10YR 2/1) clay loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure; friable; common fine roots; neutral; gradual wavy boundary.
- Btg1—13 to 19 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; many prominent very dark gray (2.5Y 3/1) organo-clay films on faces of peds and in pores; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
- Btg2—19 to 28 inches; grayish brown (2.5Y 5/2) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many prominent dark gray (2.5Y 4/1) clay films on faces of peds; few fine light olive brown (2.5Y 5/4) iron and manganese oxide nodules throughout; common medium distinct olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; slightly alkaline; gradual wavy boundary.
- Btg3—28 to 39 inches; grayish brown (2.5Y 5/2) loam; weak fine and medium subangular blocky structure; friable; common fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; black (N 2.5/) krotovina at a depth of 30 to 39 inches; few fine dark yellowish brown (10YR 4/6) iron and manganese oxide nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; slightly alkaline; gradual wavy boundary.

BCtg—39 to 44 inches; grayish brown (2.5Y 5/2) loam; weak medium subangular blocky structure; friable; few very fine roots; few faint dark gray (2.5Y 4/1) clay films on faces of peds; few fine dark yellowish brown (10YR 4/6) iron and manganese oxide nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; strongly effervescent; slightly alkaline; gradual wavy boundary.

- Cg1—44 to 54 inches; 55 percent dark gray (2.5Y 4/1), 35 percent gray (2.5Y 5/1), and 10 percent light yellowish brown (2.5Y 6/4), stratified sandy loam and loamy sand; massive in the sandy loam and single grain in the loamy sand; friable in the sandy loam and loose in the loamy sand; few very fine roots; violently effervescent; moderately alkaline; gradual wavy boundary.
- Cg2—54 to 80 inches; 45 percent dark gray (2.5Y 4/1), 45 percent gray (2.5Y 5/1), and 10 percent light olive brown (2.5Y 5/6), stratified silt loam, sandy loam, and loamy sand; massive in the silt loam and sandy loam and single grain in the loamy sand; friable; few very fine roots; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Depth to carbonates: More than 30 inches

Depth to the base of soil development: 35 to 55 inches

Ap and A horizons:

Hue-10YR

Value—2 or 3

Chroma—1 or 2

Texture—loam or clay loam

Bg, Btg, or BCg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value-4 to 6

Chroma—0 to 2

Texture—loam, clay loam, silt loam, or sandy loam

Content of gravel—less than 10 percent

Cg or C horizon:

Hue-10YR, 2.5Y, or 5Y

Value—5 or 6

Chroma-1 to 6

Texture—stratified sandy loam, loam, silt loam, loamy sand, or sand

Content of gravel—less than 15 percent

125A—Selma loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Toeslopes

Map Unit Composition

Selma and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

Soils that contain more sand and less clay in the upper 40 inches

Dissimilar soils:

- Somewhat poorly drained soils on summits and footslopes
- Soils that are subject to flooding
- The very poorly drained Houghton soils on toeslopes

Properties and Qualities of the Selma Soil

Parent material: Outwash
Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Somonauk Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Somonauk silt loam, 0 to 2 percent slopes; at an elevation of 822 feet; 700 feet south and 2,400 feet west of the northeast corner of sec. 25, T. 41 N., R. 4 E.; De Kalb County, Illinois; USGS Genoa topographic quadrangle; lat. 42 degrees 00 minutes 26 seconds N. and long. 88 degrees 43 minutes 24 seconds W., NAD 27; UTM Zone 16, 357276E and 4652019N, NAD 83:

- Ap—0 to 4 inches; 85 percent dark grayish brown (10YR 4/2) and 15 percent dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; gradual wavy boundary.
- E—4 to 9 inches; 80 percent dark grayish brown (10YR 4/2) and 20 percent brown (10YR 4/3) silt loam, light brownish gray (10YR 6/2) dry; weak medium and thick platy structure; friable; common very fine and fine roots; neutral; clear smooth boundary.
- Bt1—9 to 14 inches; brown (10YR 4/3) silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR 3/3) clay films on faces of peds and in pores; few distinct light brownish gray (10YR 6/2) (dry) clay depletions on faces of peds; common fine black (10YR 2/1) manganese oxide nodules throughout; moderately acid; gradual wavy boundary.

Bt2—14 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; common medium black (10YR 2/1) manganese oxide nodules throughout; moderately acid; gradual wavy boundary.

- Bt3—21 to 29 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium and coarse prismatic structure; friable; common fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; common medium black (10YR 2/1) manganese oxide nodules throughout; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; gradual wavy boundary.
- Bt4—29 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; common fine black (10YR 2/1) manganese oxide nodules throughout; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; gradual wavy boundary.
- 2Bt5—34 to 39 inches; yellowish brown (10YR 5/4) silty clay loam that contains 13 percent sand; moderate medium angular blocky structure; friable; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; common fine black (10YR 2/1) manganese oxide nodules throughout; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; 1 percent gravel; moderately acid; gradual wavy boundary.
- 2Bt6—39 to 49 inches; yellowish brown (10YR 5/4) loam; moderate medium and coarse angular blocky structure; friable; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; few fine black (10YR 2/1) manganese oxide nodules throughout; common fine distinct yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 6 percent gravel; moderately acid; gradual wavy boundary.
- 2Bt7—49 to 55 inches; brown (7.5YR 4/3) loam; weak medium and coarse angular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; few fine black (10YR 2/1) manganese oxide nodules throughout; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 8 percent gravel; slightly acid; clear smooth boundary.
- 2Bt8—55 to 61 inches; brown (7.5YR 4/3) sandy loam; weak medium angular blocky structure; friable; common distinct dark brown (10YR 3/3) clay films on faces of peds and in pores; 10 percent gravel; slightly acid; clear smooth boundary.
- 2Bt9—61 to 70 inches; 60 percent dark yellowish brown (10YR 4/4) and 40 percent brown (7.5YR 4/3) sandy loam; weak medium subangular blocky structure; friable; few distinct dark brown (10YR 3/3) clay films on faces of peds and in pores; 8 percent gravel; neutral; gradual wavy boundary.
- 2C—70 to 80 inches; 70 percent dark yellowish brown (10YR 4/4) and 30 percent yellowish brown (10YR 5/4), stratified gravelly sandy loam and gravelly sand; massive; very friable; 15 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 20 to 40 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 42 to 75 inches

Ap or A horizon:

Hue—10YR

Value-3 to 5

Chroma—2 or 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value-4 to 6

Chroma—2 or 3

Texture—silt loam

Bt horizon:

Hue-10YR or 7.5YR

Value-4 to 6

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—loam, clay loam, silt loam, sandy loam, sandy clay loam, or silty clay loam

Content of gravel—less than 15 percent

2BC horizon (where present):

Hue-10YR or 7.5YR

Value—4 to 6

Chroma-3 to 6

Texture—loam, clay loam, silt loam, sandy loam, sandy clay loam, or silty clay loam

Content of gravel—less than 15 percent

2C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma-3 to 6

Texture—stratified loam, sandy loam, or silt loam or the gravelly analogs of these textures with thin strata of other textures

Content of gravel—less than 20 percent

668B—Somonauk silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Summits and backslopes

Map Unit Composition

Somonauk and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker and darker surface layer
- Soils that are more than 40 inches deep to outwash

- Soils that have till in the lower part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 5 percent *Dissimilar soils:*
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Somonauk Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Sparta Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls

Typical Pedon

Sparta loamy sand, 0 to 2 percent slopes; 2,150 feet north and 1,939 feet east of the southwest corner of sec. 20, T. 23 N., R. 10 E.; Ogle County, Illinois; USGS Daysville topographic quadrangle; lat. 41 degrees 57 minutes 58 seconds N. and long. 89 degrees 22 minutes 13 seconds W., NAD 27; UTM Zone 16, 303579E and 4648734N, NAD 83:

- A1—0 to 10 inches; very dark gray (10YR 3/1) loamy sand, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate very fine granular; very friable; many fine roots; neutral; clear smooth boundary.
- A2—10 to 17 inches; very dark grayish brown (10YR 3/2) loamy sand, grayish brown (10YR 5/2) dry; very weak medium and coarse subangular blocky structure parting to moderate very fine granular; very friable; common fine roots; neutral; clear smooth boundary.
- Bw1—17 to 24 inches; dark yellowish brown (10YR 5/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings and few faint dark brown (10YR 3/3) clay bridges on sand grains; strongly acid; clear smooth boundary.

Bw2—24 to 31 inches; brown (7.5YR 5/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.

C—31 to 60 inches; reddish yellow (7.5YR 6/6) sand; single grain; loose; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches Depth to carbonates: More than 80 inches

Ap or A horizon:

Hue—7.5YR or 10YR

Value—2 or 3

Chroma—1 or 2

Texture—fine sand, sand, loamy fine sand, or loamy sand

AB horizon (where present):

Hue—7.5YR or 10YR

Value-3

Chroma—2 or 3

Texture—fine sand, sand, loamy fine sand, or loamy sand

Bw horizon:

Hue-7.5YR or 10YR

Value—3 to 6

Chroma-3 to 6

Texture—fine sand, sand, loamy sand, or loamy fine sand

C horizon:

Hue-7.5YR or 10YR

Value—4 to 6

Chroma—3 to 6

Texture—fine sand or sand

88B—Sparta loamy sand, 1 to 6 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Summits and shoulders

Map Unit Composition

Sparta and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have less sand and more clay in the lower part of the profile
- Soils that have slopes of less than 1 percent or more than 6 percent *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes
- The poorly drained Selma soils on toeslopes

Properties and Qualities of the Sparta Soil

Parent material: Eolian sands and/or outwash

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Low

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Very low Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

88D—Sparta loamy sand, 6 to 12 percent slopes

Setting

Landform: Stream terraces

Position on the landform: Shoulders and backslopes

Map Unit Composition

Sparta and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have less sand and more clay in the lower part of the profile
- Soils that have slopes of less than 6 percent or more than 12 percent *Dissimilar soils:*
- Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Sparta Soil

Parent material: Eolian sands and/or outwash

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Ponding: None Flooding: None

Potential for frost action: Low

Hazard of corrosion: Low for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 6s

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Spaulding Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Calciaquolls

Typical Pedon

Spaulding silty clay loam, 0 to 2 percent slopes; at an elevation of about 612 feet; 2,410 feet east and 1,300 feet south of the northwest corner of sec. 22, T. 17 N., R. 3 W.; Sangamon County, Illinois; USGS Cornland topographic quadrangle; lat. 39 degrees 54 minutes 52 seconds N. and long. 89 degrees 24 minutes 54 seconds W., NAD 27; UTM Zone 16, 293581E and 4421059N, NAD 83:

- Apk—0 to 9 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak and moderate fine granular structure; friable; many fine roots; few snail shells; violently effervescent; 15 percent calcium carbonate equivalent; moderately alkaline; abrupt smooth boundary.
- Ak1—9 to 18 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate very fine and fine subangular blocky structure; friable; many fine roots; few snail shells; violently effervescent; 22 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.
- Ak2—18 to 22 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate very fine and fine subangular blocky structure; firm; common fine roots; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation along micropores; few snail shells; violently effervescent; 22 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.
- Btkg1—22 to 26 inches; dark gray (2.5Y 4/1) silty clay loam; moderate very fine and fine subangular blocky structure; firm; common fine roots; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common distinct black (10YR 2/1) organic coatings in root channels and/or pores; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation along micropores; few fine carbonate nodules; strongly effervescent; 12 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.
- Btkg2—26 to 32 inches; olive gray (5Y 5/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; common fine roots; few distinct gray (5Y 5/1) clay films on faces of peds; common fine prominent black (10YR 2/1) masses of manganese oxide accumulation in the matrix; common medium prominent light olive brown (2.5Y 5/6) and yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium and coarse carbonate nodules; strongly effervescent; 12 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.
- Btkg3—32 to 38 inches; gray (5Y 6/1) silty clay loam; moderate fine and medium subangular blocky structure; firm; few distinct gray (5Y 5/1) clay films on faces of peds; very few distinct very dark gray (10YR 3/1) organic coatings in root channels and/or pores; many fine prominent light olive brown (2.5Y 5/6) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix;

few fine carbonate nodules; strongly effervescent; 16 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.

- BCkg—38 to 44 inches; gray (5Y 6/1) silty clay loam; weak medium subangular blocky structure; firm; few distinct gray (5Y 5/1) clay films in root channels and/or pores; few distinct very dark gray (10YR 3/1) organic coatings in root channels and/or pores; many fine prominent light olive brown (2.5Y 5/6) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine carbonate nodules; strongly effervescent; 16 percent calcium carbonate equivalent; moderately alkaline; clear smooth boundary.
- Cg—44 to 80 inches; gray (5Y 6/1) silt loam; massive; friable; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; strongly effervescent; 19 percent calcium carbonate equivalent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Thickness of the loess or other silty material: More than 80 inches

Depth to carbonates: 0 to 16 inches

Depth to the base of soil development: 22 to 60 inches

Apk or Ak horizon:

Hue-10YR, 2.5Y, 5Y, or N

Value—2 or 3

Chroma—0 or 1

Texture—silty clay loam

Bkg or Btkg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—3 to 6

Chroma—0 to 2

Texture—silty clay loam or silt loam

Cg horizon:

Hue-7.5YR, 10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 8

Texture—silt loam

712A—Spaulding silty clay loam, 0 to 2 percent slopes

Setting

Landform: Depressions and ground moraines

Position on the landform: Toeslopes

Map Unit Composition

Spaulding and similar soils: 91 percent

Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:

- Soils that have loamy drift in the lower part of the profile
- · Soils that have a thicker surface layer
- Soils that do not have carbonates in the surface layer

Dissimilar soils:

 The somewhat poorly drained Arrowsmith and Muscatune soils on summits and footslopes

Properties and Qualities of the Spaulding Soil

Parent material: Calcareous loess Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

St. Charles Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

St. Charles silt loam, 2 to 5 percent slopes; at an elevation of 635 feet; 80 feet north and 2,170 feet west of the southeast corner of sec. 26, T. 16 N., R. 8 E.; Bureau County, Illinois; USGS Wyanet topographic quadrangle; lat. 41 degrees 20 minutes 09 seconds N. and long. 89 degrees 32 minutes 12 seconds W., NAD 27; UTM Zone 16, 287733E and 4579146N, NAD 83:

- Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; few fine roots; moderately acid; abrupt smooth boundary.
- Bt1—8 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; many faint dark brown (10YR 3/3) organic coatings and dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—15 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt3—21 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine iron and manganese oxide concretions throughout; moderately acid; clear smooth boundary.
- Bt4—34 to 44 inches; yellowish brown (10YR 5/4) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; many faint dark yellowish brown (10YR 4/4) clay films and many distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium faint brown (7.5YR 4/4)

masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

- Bt5—44 to 50 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; many faint dark yellowish brown (10YR 4/4) clay films and distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- 2Bt6—50 to 57 inches; yellowish brown (10YR 5/6), stratified loam, sandy loam, and silt loam; weak medium subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
- 2C—57 to 60 inches; yellowish brown (10YR 5/4), stratified loam and silt loam; massive; friable; moderately acid.

Range in Characteristics

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: More than 44 inches

Depth to the base of soil development: 44 to 70 inches

Ap or A horizon:

Hue-10YR

Value—3 to 5

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue—10YR

Value—4 to 6

Chroma-2 to 4

Texture—silt loam

BE or Bt horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam or silt loam

2Bt or 2BC horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma-3 to 6

Texture—stratified loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or silt loam

Content of gravel—less than 15 percent

2C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—stratified loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or silt loam or the gravelly analogs of these textures

Content of gravel—less than 20 percent

243A—St. Charles silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains

Position on the landform: Summits

Map Unit Composition

St. Charles and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- Soils that have a thicker and darker surface layer
- · Soils that have slopes of more than 2 percent
- · Soils that are underlain by gravel

Dissimilar soils:

- The somewhat poorly drained Kendall soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the St. Charles Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

243B—St. Charles silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains Position on the landform: Summits and shoulders

Map Unit Composition

St. Charles and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to outwash
- Soils that are more than 60 inches deep to outwash
- · Soils that have a thicker and darker surface layer
- Soils that have slopes of less than 2 percent or more than 5 percent
- · Soils that are underlain by gravel
- Soils that are moderately eroded

Dissimilar soils:

- The somewhat poorly drained Kendall soils on summits and footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the St. Charles Soil

Parent material: Loess over stratified loamy outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

243C2—St. Charles silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Stream terraces and outwash plains Position on the landform: Shoulders and backslopes

Map Unit Composition

St. Charles and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are less than 40 inches deep to outwash
- · Soils that are more than 60 inches deep to outwash
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that are underlain by gravel
- · Soils that are severely eroded or only slightly eroded

Dissimilar soils:

The somewhat poorly drained Kendall soils on summits and footslopes

Properties and Qualities of the St. Charles Soil

Parent material: Loess over outwash

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete

Surface runoff class: Medium Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

St. Clair Series

Taxonomic classification: Fine, illitic, mesic Oxyaquic Hapludalfs

Typical Pedon

- St. Clair silty clay loam, 12 to 20 percent slopes; at an elevation of 614 feet; 320 feet north and 80 feet west of the center of sec. 34, T. 30 N., R. 4 E.; Livingston County, Illinois; USGS Blackstone topographic quadrangle; lat. 41 degrees 01 minute 36 seconds N. and long. 88 degrees 44 minutes 54 seconds W., NAD 27; UTM Zone 16, 353019E and 4543210N, NAD 83:
- A—0 to 5 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.
- Bt1—5 to 12 inches; brown (10YR 4/3) silty clay; moderate fine subangular blocky structure; very firm; few very fine roots; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.
- Bt2—12 to 18 inches; brown (10YR 4/3) silty clay; moderate fine subangular blocky structure; very firm; few very fine roots; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common medium faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; 1 percent gravel; strongly effervescent; slightly alkaline; clear smooth boundary.
- BC—18 to 26 inches; grayish brown (10YR 5/2) silty clay; moderate fine subangular blocky structure; very firm; few very fine roots; common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; 3 percent gravel; violently effervescent; moderately alkaline; clear smooth boundary.
- 2Cd—26 to 60 inches; 70 percent grayish brown (10YR 5/2) and 30 percent light olive brown (2.5Y 5/4) silty clay; massive; very firm; few very fine roots; common

medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 3 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: Less than 20 inches

Depth to carbonates: 10 to 30 inches

Depth to the base of soil development: 20 to 48 inches

A horizon:

Hue-7.5YR or 10YR

Value—2 to 5

Chroma—1 to 3

Texture—silty clay loam or silt loam

E horizon (where present):

Hue—7.5YR or 10YR

Value-3 to 5

Chroma—2 or 3

Texture—silty clay loam or silt loam

Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—3 or 4

Texture—silty clay or clay

Content of gravel—less than 15 percent

2Cd horizon:

Hue-7.5YR or 10YR

Value—4 to 6

Chroma—1 to 4

Texture—silty clay, clay, silty clay loam, or clay loam

Content of gravel—1 to 15 percent

560D2—St. Clair silty clay loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

St. Clair and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the middle and lower parts of the profile
- Soils that have more clay in the surface layer
- Soils that have slopes of less than 6 percent or more than 12 percent
- · Soils that are more than 20 inches deep to till

Dissimilar soils:

- The calcareous, moderately well drained Chatsworth soils on backslopes
- The nearly level, somewhat poorly drained Nappanee soils on footslopes

Properties and Qualities of the St. Clair Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 20 to 48 inches to dense material Available water capacity: About 5.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.5 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

560E—St. Clair silty clay loam, 12 to 20 percent slopes

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

St. Clair and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- · Soils that have less clay and more silt in the middle and lower parts of the profile
- Soils that are moderately eroded
- Soils that are more than 20 inches deep to till
- Soils that have slopes of less than 12 percent or more than 20 percent *Dissimilar soils:*
- Severely eroded soils on shoulders and backslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The nearly level, somewhat poorly drained Nappanee soils on footslopes

Properties and Qualities of the St. Clair Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 20 to 48 inches to dense material Available water capacity: About 4.1 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Starks Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Starks silt loam, 0 to 2 percent slopes; at an elevation of 610 feet; 30 feet south and 600 feet east of the northwest corner of sec. 33, T. 30 N., R. 4 E.; Livingston County, Illinois; USGS Streator South topographic quadrangle; lat. 41 degrees 01 minute 58 seconds N. and long. 88 degrees 46 minutes 27 seconds W., NAD 27; UTM Zone 16, 350840E and 4543911N, NAD 83:

- Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; few very fine roots; neutral; abrupt smooth boundary.
- E—10 to 14 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; moderate fine subangular blocky structure; friable; few very fine roots; many distinct white (10YR 8/1) (dry) silt coatings on faces of peds; common fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; neutral; abrupt smooth boundary.
- BE—14 to 17 inches; 80 percent brown (10YR 4/3) and 20 percent grayish brown (10YR 5/2) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; many distinct white (10YR 8/1) (dry) silt coatings on faces of peds; common fine faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; abrupt smooth boundary.
- Bt—17 to 21 inches; brown (10YR 4/3) silty clay loam; weak fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; many faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.
- Btg1—21 to 25 inches; gray (10YR 5/1) silty clay loam; weak fine prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; common fine prominent brown (7.5YR 4/4) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

- Btg2—25 to 31 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- 2Btg3—31 to 43 inches; grayish brown (2.5Y 5/2), stratified silt loam and sandy loam; weak medium prismatic structure parting to weak fine angular blocky; friable; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
- 2Cg—43 to 60 inches; grayish brown (2.5Y 5/2) sandy loam with thin strata of loamy sand; massive; very friable; many coarse prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the loess or other silty material: 24 to 40 inches

Depth to carbonates: 40 to 70 inches

Depth to the base of soil development: 35 to more than 60 inches

Ap horizon:

Hue-10YR

Value—2 to 5

Chroma—1 to 3

Texture—silt loam

E horizon (where present):

Hue-10YR

Value—5 or 6

Chroma—2 or 3

Texture—silt loam

Bt and Btg horizons:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay loam or silt loam

2Btg or 2BCg horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value-4 to 6

Chroma—1 to 6

Texture—loam, clay loam, silty clay loam, silt loam, or sandy loam

Content of gravel—less than 5 percent

2Cg horizon:

Hue-7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma—1 to 6

Texture—stratified sandy loam, loam, silt loam, sandy clay loam, clay loam, or loamy sand

Content of gravel—less than 15 percent

132A—Starks silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Footslopes and summits

Map Unit Composition

Starks and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are more than 40 inches deep to outwash
- · Soils that have a thicker and darker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet Dissimilar soils:
- · The well drained Camden soils on summits
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Starks Soil

Parent material: Loess or other silty material and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

Streator Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon

Streator silty clay loam, 0 to 2 percent slopes; at an elevation of 738 feet; 2,544 feet north and 150 feet west of the southeast corner of sec. 36, T. 29 N., R. 1 E.; Marshall County, Illinois; USGS Minonk topographic quadrangle; lat. 40 degrees 55 minutes 58 seconds N. and long. 89 degrees 02 minutes 54 seconds W., NAD 27; UTM Zone 16, 327548E and 4533324N, NAD 83:

- Ap—0 to 9 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- A—9 to 13 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
- BA—13 to 17 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure parting to moderate fine and very fine subangular blocky; friable; common very fine roots; common fine distinct yellowish brown (10YR 5/4) rounded iron masses with diffuse boundaries throughout the matrix; neutral; clear smooth boundary.
- Bg—17 to 24 inches; gray (5Y 5/1) silty clay; moderate medium prismatic structure parting to moderate fine subangular blocky; firm; common very fine roots; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine prominent yellowish brown (10YR 5/4) rounded iron masses with diffuse boundaries and common fine prominent black (10YR 2/1) rounded iron and manganese oxide nodules with diffuse boundaries throughout the matrix; neutral; clear smooth boundary.
- Btg1—24 to 33 inches; gray (5Y 5/1) silty clay; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; many distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) rounded iron masses with diffuse boundaries and common fine and medium prominent black (10YR 2/1) rounded iron and manganese oxide nodules with diffuse boundaries throughout the matrix; neutral; gradual smooth boundary.
- Btg2—33 to 42 inches; gray (5Y 5/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and brown (10YR 5/3) rounded iron masses with diffuse boundaries and common fine and medium prominent black (10YR 2/1) rounded iron and manganese oxide nodules with diffuse boundaries throughout the matrix; neutral; clear wavy boundary.
- 2Btg3—42 to 56 inches; grayish brown (2.5Y 5/2) clay; weak medium prismatic structure; firm; few very fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and distinct light olive brown (2.5Y 5/4) rounded iron masses with diffuse boundaries throughout the matrix; many fine faint gray (5Y 6/1) iron depletions lining pores; 5 percent gravel; slightly alkaline; gradual wavy boundary.
- 2BCkg—56 to 68 inches; grayish brown (2.5Y 5/2) silty clay; weak coarse prismatic structure; very firm; few very fine roots; common prominent light gray (5Y 7/1) calcium carbonate coatings on faces of peds and lining root pores; common fine prominent yellowish brown (10YR 5/6) and many fine and medium distinct light olive brown (2.5Y 5/4) rounded iron masses with diffuse boundaries throughout the matrix; common fine prominent white (10YR 8/1) irregular calcium carbonate nodules throughout the matrix; many fine faint gray (5Y 6/1) iron depletions lining pores; 5 percent gravel; slightly effervescent; moderately alkaline; gradual wavy boundary.
- 2Cg—68 to 80 inches; grayish brown (2.5Y 5/2) silty clay; massive; very firm; many fine and medium distinct light olive brown (2.5Y 5/4) rounded iron masses with diffuse boundaries throughout the matrix; common fine faint gray (5Y 6/1) iron depletions throughout the matrix; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Thickness of the loess or other silty material: 30 to 50 inches

Depth to carbonates: 30 to 60 inches

Depth to the base of soil development: 40 to 70 inches

Ap and A horizons:

Hue-10YR

Value—2

Chroma—1 or 2

Texture—silty clay loam or silty clay

BA or AB horizon (where present):

Hue—10YR or 2.5Y

Value—3 to 6

Chroma—1 or 2

Texture—silty clay loam or silty clay

Bg and Btg horizons:

Hue-10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam, silty clay, or silt loam

2Btg and 2BCkg horizons:

Hue-10YR, 2.5Y, 5Y, or N

Value-4 to 6

Chroma—0 to 2

Texture—silty clay, clay, or silty clay loam

2Cg horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6

Texture—silty clay or clay

435A—Streator silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines, lake plains, and depressions

Position on the landform: Toeslopes

Map Unit Composition

Streator and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have till at a depth of less than 30 inches or more than 50 inches
- Soils that have less clay and more silt in the control section
- Soils that have 6 to 12 inches of silty overwash

Dissimilar soils:

The somewhat poorly drained Rutland soils on summits and footslopes

Properties and Qualities of the Streator Soil

Parent material: Loess or other silty material and the underlying till or lacustrine

deposits

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow Permeability below a depth of 60 inches: Very slow to moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 7.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Stronghurst Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Stronghurst silt loam, 0 to 2 percent slopes; at an elevation of 721 feet; 1,440 feet north and 200 feet east of the southwest corner of sec. 26, T. 15 N., R. 4 W.; Mercer County, Illinois; USGS Buffalo Prairie topographic quadrangle; lat. 41 degrees 15 minutes 43 seconds N. and long. 90 degrees 49 minutes 20 seconds W.; UTM Zone 15, 682433E and 4570123N, NAD 83:

- Ap—0 to 7 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak medium granular structure; friable; common roots; neutral; clear smooth boundary.
- E—7 to 11 inches; dark grayish brown (10YR 4/2) silt loam; weak fine subangular blocky structure; friable; common roots; few fine and medium dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; slightly acid; clear smooth boundary.
- BE—11 to 15 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; common roots; common faint light brownish gray (10YR 6/2) (dry) clay depletions on faces of peds; few dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; strongly acid; clear smooth boundary.
- Bt1—15 to 22 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; few roots; many faint dark grayish brown (10YR 4/2) clay films on faces of peds; common dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.

Bt2—22 to 29 inches; brown (10YR 5/3) silty clay loam; moderate fine and medium subangular blocky structure; firm; few roots; many faint dark grayish brown (10YR 4/2) clay films on faces of peds; many dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation and common medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; strongly acid; gradual smooth boundary.

- Bt3—29 to 35 inches; brown (10YR 5/3) silty clay loam; weak coarse subangular blocky structure; firm; few roots; common distinct dark gray (10YR 4/1) clay films on faces of peds and on surfaces along root channels; many dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; many medium faint dark yellowish brown (10YR 4/4) and many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- Bt4—35 to 47 inches; pale brown (10YR 6/3) silty clay loam; weak coarse subangular blocky structure; friable; few faint dark grayish brown (10YR 4/2) clay films on faces of peds and on surfaces along root channels; many dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; gradual wavy boundary.
- C—47 to 60 inches; mixed pale brown (10YR 6/3) and yellowish brown (10YR 5/6) silt loam; massive; friable; many dark reddish brown (5YR 3/2) iron and manganese oxide concretions in the matrix; moderately acid.

Range in Characteristics

Depth to the base of soil development: More than 42 inches

Ap or A horizon:

Hue-10YR

Value-3 to 6

Chroma—1 or 2

Texture—silt loam

E horizon:

Hue-10YR

Value—4 to 6

Chroma—2 or 3

Texture—silt loam

Bt or Btg horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay loam or silt loam

C or Cg horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silt loam or silty clay loam

278A—Stronghurst silt loam, 0 to 2 percent slopes Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Stronghurst and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker and darker surface layer
- Soils that have slopes of more than 2 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- · The well drained Rozetta soils on summits or shoulders

Properties and Qualities of the Stronghurst Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

278B—Stronghurst silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines

Position on the landform: Summits

Map Unit Composition

Stronghurst and similar soils: 97 percent

Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker and darker surface layer
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are moderately eroded

Dissimilar soils:

· The well drained Rozetta soils on summits or shoulders

Properties and Qualities of the Stronghurst Soil

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Sunbury Series

Taxonomic classification: Fine, smectitic, mesic Aquollic Hapludalfs

Typical Pedon

Sunbury silt loam, 0 to 2 percent slopes; at an elevation of about 680 feet; 1,270 feet north and 1,410 feet east of the southwest corner of sec. 19, T. 16 N., R. 7 E.; Douglas County, Illinois; USGS Atwood topographic quadrangle; lat. 39 degrees 49 minutes 27.4 seconds N. and long. 88 degrees 27 minutes 25.6 seconds W.; UTM Zone 16, 375298E and 4409059N, NAD 27:

- Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common very fine roots; slightly acid; clear smooth boundary.
- E—8 to 12 inches; brown (10YR 5/3) silt loam; moderate thin and medium platy structure parting to moderate fine granular; friable; common very fine roots; moderately acid; clear smooth boundary.
- BE—12 to 15 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; firm; common very fine and fine roots; many distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; moderately acid; clear smooth boundary.

- Bt1—15 to 25 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine and fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few medium black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Bt2—25 to 36 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; common fine roots; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; few medium black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; few medium distinct dark gray (10YR 4/1) iron depletions in the matrix; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- Bt3—36 to 43 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to weak coarse subangular blocky; friable; few very fine and fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; common medium black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common medium faint light brownish gray (10YR 6/2) iron depletions in the matrix; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.
- 2Btg—43 to 47 inches; grayish brown (10YR 5/2) loam; weak coarse subangular blocky structure; firm; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; few fine and medium black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 1 percent gravel; slightly alkaline; abrupt smooth boundary.
- 2C—47 to 72 inches; 50 percent grayish brown (10YR 5/2) and 50 percent yellowish brown (10YR 5/6) loam; massive; firm; common fine and medium white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; few fine and medium black (7.5YR 2.5/1) weakly cemented manganese oxide nodules throughout; 3 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 40 to 60 inches Depth to carbonates: 45 to 60 inches

Ap or A horizon:

Hue—10YR or 2.5Y Value—2 or 3 Chroma—1 or 2 Texture—silt loam

E horizon:

Hue—10YR Value—3 to 5 Chroma—2 or 3 Texture—silt loam

BE horizon:

Hue-10YR

Value—4 or 5 Chroma—3 or 4

Texture—silt loam or silty clay loam

Bt horizon:

Hue-10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silty clay loam or silty clay

2Btg or 2Bt horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma-2 to 6

Texture—loam, clay loam, or silt loam Content of gravel—less than 5 percent

2C or 2Cg horizon:

Hue-10YR or 2.5Y

Value—5 or 6

Chroma—1 to 8

Texture—loam, clay loam, silt loam, or silty clay loam

Content of gravel—less than 5 percent

234A—Sunbury silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and till plains

Position on the landform: Summits and footslopes

Map Unit Composition

Sunbury and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- · Soils that have a thicker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of more than 2 percent
- Soils that have more than 60 inches of loess over the till

Dissimilar soils:

• The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Sunbury Soil

Parent material: Loess over loamy till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None

Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Swygert Series

Taxonomic classification: Fine, mixed, active, mesic Aquic Argiudolls

Taxadjunct features: The Swygert soils in map units 91B2, 91C2, and 91C3 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. The Swygert soils in map units 91B2 and 91C2 are classified as fine, mixed, active, mesic Aquollic Hapludalfs. The Swygert soil in map unit 91C3 is classified as a fine, mixed, active, mesic Aquic Hapludalf.

Typical Pedon

Swygert silty clay loam, 0 to 2 percent slopes; at an elevation of 675 feet; 339 feet south and 66 feet east of the northwest corner of sec. 7, T. 25 N., R. 13 W.; Iroquois County, Illinois; USGS Onarga East topographic quadrangle; lat. 40 degrees 38 minutes 36 seconds N. and long. 87 degrees 53 minutes 04 seconds W., NAD 27; UTM Zone 16, 425215E and 4499540N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate very fine granular structure; friable; many fine roots; slightly acid; abrupt wavy boundary.
- A—7 to 12 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak medium angular blocky structure parting to weak fine subangular blocky; friable; many fine roots; common black (N 2.5/) krotovinas; slightly acid; abrupt smooth boundary.
- Bt1—12 to 18 inches; very dark grayish brown (10YR 3/2) silty clay, gray (10YR 5/1) dry; moderate fine subangular blocky structure; friable; many fine roots; many distinct black (10YR 2/1) and very dark gray (10YR 3/1) organo-clay films on faces of peds; common fine black (10YR 2/1) iron and manganese oxide concretions throughout; common fine faint brown (10YR 4/3) masses of iron accumulation in the matrix; slightly acid; clear wavy boundary.
- Bt2—18 to 26 inches; brown (10YR 4/3) silty clay; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films and dark grayish brown (10YR 4/2) clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine distinct olive gray (5Y 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- Bt3—26 to 31 inches; yellowish brown (10YR 5/4) silty clay; moderate medium prismatic structure parting to weak medium and fine angular blocky; firm; common fine roots; common distinct very dark gray (10YR 3/1) organo-clay films in root channels; common very dark gray (10YR 3/1) krotovinas; common distinct dark gray (10YR 4/1) and gray (10YR 5/1) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix;

common fine prominent gray (5Y 5/1) iron depletions in the matrix; slightly effervescent; 7 percent calcium carbonate equivalent; moderately alkaline; gradual smooth boundary.

- 2Bt4—31 to 41 inches; light olive brown (2.5Y 5/4) silty clay; moderate medium prismatic structure parting to weak coarse angular blocky; very firm; few fine roots; common prominent very dark gray (10YR 3/1) organo-clay films and gray (5Y 5/1) clay films on faces of peds; common medium prominent gray (5Y 5/1) iron depletions in the matrix; slightly effervescent; 16 percent calcium carbonate equivalent; moderately alkaline; gradual smooth boundary.
- 2Bt5—41 to 51 inches; light olive brown (2.5Y 5/4) silty clay; weak coarse prismatic structure; very firm; few fine roots; common distinct very dark gray (5Y 3/1) organo-clay films in root channels; many distinct dark gray (5Y 4/1) clay films on faces of peds; common fine black (10YR 2/1) iron and manganese oxide concretions throughout; few fine distinct olive (5Y 5/6) and few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine prominent gray (5Y 5/1) iron depletions in the matrix; strongly effervescent; 18 percent calcium carbonate equivalent; moderately alkaline; gradual smooth boundary.
- 2Cd—51 to 60 inches; brown (10YR 5/3) silty clay; massive; very firm; many distinct gray (5Y 6/1) pressure faces; common fine black (10YR 2/1) iron and manganese oxide concretions throughout; few coarse prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; strongly effervescent; 19 percent calcium carbonate equivalent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to till: Less than 45 inches Depth to carbonates: 20 to 50 inches

Depth to the base of soil development: 35 to 55 inches; ranges to 20 inches in pedons in severely eroded areas

Ap and A horizons:

Hue—10YR

Value—2 or 3

Chroma-1 or 2

Texture—silty clay loam or silt loam

Bt and 2Bt horizons:

Hue—10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma-2 to 6

Texture—silty clay or clay

2Cd horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 6

Texture—silty clay, silty clay loam, or clay

91A—Swygert silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Footslopes and summits

Map Unit Composition

Swygert and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have a thinner subsurface layer
- Soils that have slopes of more than 2 percent
- Soils that have more than 50 percent clay in the control section

Dissimilar soils:

• The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Swygert Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 35 to 55 inches to dense material Available water capacity: About 7.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

91B—Swygert silty clay loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines Position on the landform: Footslopes and backslopes

Map Unit Composition

Swygert and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are moderately eroded

- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have more than 50 percent clay in the control section *Dissimilar soils:*

• The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Swygert Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 35 to 55 inches to dense material Available water capacity: About 7.2 inches to a depth of 60 inches Content of organic matter in the surface layer: 3.0 to 5.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

91B2—Swygert silty clay loam, 2 to 4 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Footslopes and backslopes

Map Unit Composition

Swygert and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that are severely eroded or only slightly eroded
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have more than 50 percent clay in the control section Dissimilar soils:
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Swygert Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 35 to 55 inches to dense material Available water capacity: About 7.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

91C2—Swygert silty clay loam, 4 to 6 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes and shoulders

Map Unit Composition

Swygert and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- · Soils that are severely eroded or only slightly eroded
- Soils that have more than 50 percent clay in the control section
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 4 percent or more than 6 percent *Dissimilar soils:*
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Swygert Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 35 to 55 inches to dense material Available water capacity: About 6.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet,

January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

91C3—Swygert silty clay loam, 4 to 6 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Swygert and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have more than 50 percent clay in the control section
- Soils that have a seasonal high water table at a depth of more than 2 feet
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that are moderately eroded

Dissimilar soils:

- The calcareous, moderately well drained Chatsworth soils on backslopes
- · The poorly drained Bryce soils on toeslopes

Properties and Qualities of the Swygert Soil

Parent material: Thin mantle of loess or other silty material and the underlying lacustrine deposits and till

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 20 to 40 inches to dense material Available water capacity: About 6.1 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.8 to 2.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 1 to 2 feet, January through May

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Hydric soil status: Not hydric

Symerton Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Oxyaquic Argiudolls

Taxadjunct features: The Symerton soil in map unit 294C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Symerton silt loam, 2 to 5 percent slopes; at an elevation of 714 feet; 102 feet north and 1,806 feet west of the southeast corner of sec. 33, T. 24 N., R. 12 W.; Iroquois County, Illinois; USGS Hoopeston topographic quadrangle; lat. 40 degrees 29 minutes 17.1 seconds N. and long. 87 degrees 42 minutes 57.9 seconds W., NAD 27; UTM Zone 16, 439310E and 4482181N, NAD 83:

- Ap—0 to 10 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; weak very fine granular structure; friable; slightly acid; abrupt smooth boundary.
- A—10 to 15 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate very fine granular structure; friable; moderately acid; clear smooth boundary.
- AB—15 to 19 inches; very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; moderate very fine granular structure; friable; many distinct black (10YR 2/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.
- 2Bt1—19 to 25 inches; brown (10YR 4/3) gravelly clay loam; moderate very fine subangular blocky structure; firm; many distinct very dark gray (10YR 3/1) organoclay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide nodules throughout; 18 percent gravel; moderately acid; clear smooth boundary.
- 2Bt2—25 to 31 inches; brown (10YR 4/3) gravelly clay loam; moderate fine subangular blocky structure; firm; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide nodules throughout; 18 percent gravel; neutral; clear smooth boundary.
- 2Bt3—31 to 35 inches; yellowish brown (10YR 5/4) gravelly loam; weak fine and medium subangular blocky structure; firm; common distinct brown (10YR 4/3) clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide nodules throughout; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation in the matrix; 18 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 3Bt4—35 to 39 inches; brown (10YR 5/3) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few distinct brown (10YR 4/3)

clay films on faces of peds; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

3C—39 to 60 inches; light olive brown (2.5Y 5/4) and light yellowish brown (2.5Y 6/4) silt loam; massive; firm; few fine prominent yellowish red (5YR 4/8) masses of iron accumulation in the matrix; few fine prominent gray (10YR 5/1) iron depletions in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to till: 22 to 50 inches

Depth to carbonates: 24 to 55 inches

Depth to the base of soil development: 30 to 50 inches

Ap, A, and AB horizons:

Hue—10YR

Value-2 to 4

Chroma—1 to 4

Texture—silt loam, loam, or silty clay loam

2Bt horizon:

Hue-7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—clay loam, silty clay loam, sandy clay, or loam or the gravelly analogs of these textures

Content of gravel—less than 20 percent

3Bt or 3BC horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma-3 or 4

Texture—silty clay loam or silt loam

Content of gravel—less than 7 percent

3C horizon:

Hue-10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—3 or 4

Texture—silty clay loam or silt loam

Content of gravel—less than 7 percent

294B—Symerton silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and lake plains

Position on the landform: Summits and backslopes

Map Unit Composition

Symerton and similar soils: 88 percent

Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:

• Soils that have less sand and more clay in the upper one-half of the profile

- Soils that have slopes of more than 5 percent
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that are moderately eroded

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Symerton Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.9 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

294C2—Symerton silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes and shoulders

Map Unit Composition

Symerton and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and more clay in the upper one-half of the profile
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that are severely eroded or only slightly eroded

Dissimilar soils:

- The nearly level, somewhat poorly drained Andres soils on summits and footslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Symerton Soil

Parent material: Thin mantle of loess or other silty material and the underlying outwash

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Slow Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Thorp Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls

Typical Pedon

Thorp silt loam, 0 to 2 percent slopes; at an elevation of 640 feet; 1,190 feet north and 2,400 feet west of the southeast corner of sec. 27, T. 36 N., R. 5 E.; La Salle County, Illinois; USGS Sheridan topographic quadrangle; lat. 41 degrees 33 minutes 42 seconds N. and long. 88 degrees 38 minutes 49 seconds W.; UTM Zone 16, 362665E and 4602414N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate very fine granular structure; friable; common very fine roots; neutral; abrupt smooth boundary.
- A—7 to 14 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.
- Eg—14 to 19 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak fine granular structure; friable; common very fine roots; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg1—19 to 21 inches; dark gray (10YR 4/1) and dark grayish brown (2.5Y 4/2) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; common very fine roots; many distinct very dark gray (10YR 3/1) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg2—21 to 33 inches; gray (5Y 5/1) and olive gray (5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular

blocky; firm; many prominent very dark gray (10YR 3/1) clay films on faces of peds; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

- Btg3—33 to 43 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine prismatic structure parting to moderate fine angular and subangular blocky; firm; many distinct very dark gray (10YR 3/1) and dark gray (N 4/) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and common fine distinct light yellowish brown (2.5Y 6/4) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- 2Btg4—43 to 50 inches; grayish brown (10YR 5/2) and yellowish brown (10YR 5/6) sandy clay loam; weak coarse subangular blocky structure; friable; few distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; neutral; clear smooth boundary.
- 2Cg—50 to 65 inches; grayish brown (10YR 5/2) and yellowish brown (10YR 5/8) sandy loam with thin strata of sand; massive; friable in the sandy loam; single grain; loose in the sand; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 14 inches Thickness of the loess or silty material: 30 to 54 inches

Depth to carbonates: More than 40 inches

Depth to the base of soil development: 40 to 65 inches

Ap and A horizons:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam

Eg horizon:

Hue-10YR or 2.5Y

Value-4 to 6

Chroma—1 or 2

Texture—silt loam

Btg horizon:

Hue—10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma-1 or 2

Texture—silty clay loam or silt loam

2Btg and/or 2BCg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 8

Texture—sandy clay loam, loam, clay loam, silt loam, or sandy loam; thin strata of silty clay loam, loamy sand, or sand in some pedons

Content of gravel—less than 10 percent

2Cg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 8

Texture—stratified sandy loam, sandy clay loam, clay loam, loam, silt loam, silty clay loam, sand, or loamy sand

Content of gravel—less than 15 percent

206A—Thorp silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and outwash plains

Position on the landform: Toeslopes

Map Unit Composition

Thorp and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- Soils that have 6 to 12 inches of silty overwash
- · Soils that have a thicker surface layer

Dissimilar soils:

· The somewhat poorly drained Brenton soils on summits

Properties and Qualities of the Thorp Soil

Parent material: Loess over stratified loamy outwash

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.4 inches to a depth of 60 inches Content of organic matter in the surface layer: 4.0 to 6.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May

Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Titus Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon

Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded; at an elevation of 470 feet; 2,650 feet west and 2,150 feet south of the northeast corner of sec. 20, T. 2 N., R. 9 W.; Adams County, Illinois; USGS Lima topographic quadrangle; lat. 40 degrees 08 minutes 25 seconds N. and long. 91 degrees 27 minutes 55 seconds W., NAD 27; UTM Zone 15, 630724E and 4444461N, NAD 83:

- Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure; very firm; few fine roots; neutral; clear smooth boundary.
- A—7 to 13 inches; dark olive gray (5Y 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very firm; few fine roots; few fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation throughout; neutral; clear smooth boundary.
- Bg1—13 to 25 inches; dark gray (2.5Y 4/1) silty clay; weak fine prismatic structure; very firm; few fine roots; many distinct dark olive gray (5Y 3/2) organo-clay films on faces of peds; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.
- Bg2—25 to 36 inches; dark gray (5Y 4/1) silty clay; weak medium prismatic structure; very firm; few very fine roots; many distinct gray (N 5/) pressure faces on faces of peds; common fine prominent brown (7.5YR 4/4) and few fine prominent black (10YR 2/1) masses of iron accumulation throughout; neutral; clear smooth boundary.
- Bg3—36 to 46 inches; dark gray (5Y 4/1) silty clay; weak medium prismatic structure; very firm; few very fine roots; many distinct gray (N 5/) pressure faces on faces of peds; common fine prominent brown (7.5YR 4/4) and few fine prominent black (10YR 2/1) masses of iron accumulation throughout; neutral; clear smooth boundary.
- Bg4—46 to 55 inches; dark gray (2.5 4/1) silty clay; weak fine prismatic structure; very firm; few very fine roots; many distinct gray (N 5/) pressure faces on faces of peds; few fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.
- BCg—55 to 68 inches; dark gray (5Y 4/1) silty clay loam; massive; very firm; few fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.
- Cg—68 to 80 inches; dark gray (5Y 4/1) silty clay loam; massive; very firm; many fine prominent brown (7.5YR 4/4) and few fine prominent black (10YR 2/1) masses of iron accumulation throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches Depth to the base of soil development: 35 to 70 inches

Ap or A horizon:

Hue—10YR, 5Y, or N

Value—2 or 3

Chroma-0 to 2

Texture—silty clay loam or silty clay

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6

Chroma—0 to 2

Texture—silty clay or silty clay loam Content of gravel—less than 2 percent

Cg and/or BCg horizon:

Hue—10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma—1 or 2

Texture—silty clay loam; thin strata of silt loam, loam, sandy loam, loamy sand, or sand in some pedons

Content of gravel—less than 15 percent

8404A—Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Titus and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a surface layer more than 24 inches thick
- Soils that have more clay and less silt in the control section
- Soils that have carbonates in the lower part of the profile

Dissimilar soils:

• The poorly drained Sawmill soils on flood plains

Properties and Qualities of the Titus Soil

Parent material: Clayey alluvium Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow or moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface to

1 foot below the surface, January through May

Depth and most likely period of ponding: 0.0 to 0.5 foot, January through May Frequency and most likely period of flooding: Occasional, November through June

Potential for frost action: High

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Negligible Susceptibility to water erosion: Low Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3w

Prime farmland category: Prime farmland where drained

Hydric soil status: Hydric

Varna Series

Taxonomic classification: Fine, illitic, mesic Oxyaquic Argiudolls

Taxadjunct features: The Varna soils in map units 223B2, 223C2, 223C3, 223D2, and 223D3 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. The Varna soils in map units 223B2, 223C2, and 223D2 are classified as fine, illitic, mesic Mollic Oxyaquic Hapludalfs. The Varna soils in map units 223C3 and 223D3 are classified as fine, illitic, mesic Oxyaquic Hapludalfs.

Typical Pedon

Varna silt loam, 2 to 4 percent slopes; at an elevation of 722 feet; 35 feet north and 860 feet east of the southwest corner of sec. 6, T. 29 N., R. 11 E.; Kankakee County, Illinois; USGS Herscher topographic quadrangle; lat. 41 degrees 00 minutes 53 seconds N. and long. 88 degrees 00 minutes 49 seconds W.; UTM Zone 16, 414761E and 4540891N, NAD 83:

- Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.
- A—8 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; slightly acid; clear smooth boundary.
- 2Bt1—12 to 18 inches; brown (10YR 4/3) silty clay loam; moderate very fine subangular blocky structure; firm; many distinct very dark gray (10YR 3/1) organoclay films on faces of peds; 5 percent gravel; moderately acid; clear smooth boundary.
- 2Bt2—18 to 24 inches; dark yellowish brown (10YR 4/4) silty clay; weak fine prismatic structure parting to moderate very fine and fine subangular blocky; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; 5 percent gravel; moderately acid; clear smooth boundary.
- 2Bt3—24 to 30 inches; light olive brown (2.5Y 5/4) silty clay; weak fine prismatic structure parting to moderate fine angular and subangular blocky; firm; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; neutral; clear wavy boundary.
- 2Bt4—30 to 42 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium angular and subangular blocky; firm; few distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; 5 percent gravel; slightly effervescent; slightly alkaline; gradual smooth boundary.
- 2BCt—42 to 48 inches; 50 percent yellowish brown (10YR 5/6) and 50 percent gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular and angular blocky; firm; few distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; 2 percent gravel; slightly effervescent; moderately alkaline; gradual wavy boundary.
- 2Cd—48 to 60 inches; 90 percent yellowish brown (10YR 5/4 and 5/6) and 10 percent gray (5Y 5/1) silty clay loam; massive; very firm; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 16 inches

Thickness of the loess or other silty material: Less than 18 inches

Depth to carbonates: 24 to 42 inches

Depth to the base of soil development: 24 to 60 inches; ranges to 18 inches in pedons in severely eroded areas

Ap or A horizon:

Hue-10YR

Value—2 or 3

Chroma—1 or 2

Texture—silt loam

Bt or 2Bt horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—3 or 4 in the upper part; 1 to 4 in the lower part Texture—silty clay loam, silty clay, or clay Content of gravel—less than 10 percent

2Cd and/or 2BC horizon:

Hue-10YR, 2.5Y, or 5Y

Value—4 to 6 Chroma—1 to 6

Texture—silty clay loam or clay loam Content of gravel—less than 10 percent

223B—Varna silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and summits

Map Unit Composition

Varna and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have less clay and more silt in the upper part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 4 percent
- · Soils that have outwash above the till

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 24 to 60 inches to dense material Available water capacity: About 8.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

223B2—Varna silt loam, 2 to 4 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines Position on the landform: Backslopes and summits

Map Unit Composition

Varna and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that have a surface layer of silty clay loam
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have outwash above the till

Dissimilar soils:

The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 24 to 60 inches to dense material Available water capacity: About 7.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

223C2—Varna silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines Position on the landform: Shoulders and backslopes

Map Unit Composition

Varna and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that have a surface layer of silty clay loam
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that have outwash above the till

Dissimilar soils:

- The nearly level, somewhat poorly drained Elliott soils on summits and footslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 24 to 60 inches to dense material Available water capacity: About 8.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland category: Prime farmland

223C3—Varna silty clay loam, 4 to 6 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Shoulders and backslopes

Map Unit Composition

Varna and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that are moderately eroded
- Soils that have less clay and more silt in the upper part of the profile
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 4 percent or more than 6 percent
- · Soils that have outwash above the till

Dissimilar soils:

- The nearly level, somewhat poorly drained Elliott soils on summits and footslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 18 to 36 inches to dense material Available water capacity: About 6.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: High

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

223D2—Varna silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Varna and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

• Soils that have less clay and more silt in the upper part of the profile

• Soils that have a surface layer of silty clay loam

- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 6 percent or more than 12 percent
- · Soils that have outwash above the till

Dissimilar soils:

- The nearly level, somewhat poorly drained Elliott soils on summits and footslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 24 to 60 inches to dense material Available water capacity: About 7.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Very high

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

223D3—Varna silty clay loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Ground moraines and end moraines

Position on the landform: Backslopes

Map Unit Composition

Varna and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the upper part of the profile
- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet
- Soils that have slopes of less than 6 percent or more than 12 percent
- · Soils that have outwash above the till

Dissimilar soils:

- The nearly level, somewhat poorly drained Elliott soils on summits and footslopes
- The calcareous, moderately well drained Chatsworth soils on backslopes
- The poorly drained Ashkum soils on toeslopes

Properties and Qualities of the Varna Soil

Parent material: Till

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 18 to 36 inches to dense material Available water capacity: About 6.5 inches to a depth of 60 inches Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and low for concrete

Surface runoff class: Very high Susceptibility to water erosion: High Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland category: Not prime farmland

Virgil Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon

Virgil silt loam, 0 to 2 percent slopes; at an elevation of 765 feet; 300 feet south and 1,346 feet east of the northwest corner of sec. 8, T. 26 N., R. 8 E.; Stephenson County, Illinois; USGS Freeport East topographic quadrangle; lat. 42 degrees 16 minutes 30 seconds N. and long. 89 degrees 36 minutes 38 seconds W., NAD 27; UTM Zone 16, 284717E and 4683613N, NAD 83:

- Ap—0 to 7 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; common fine roots; neutral; abrupt smooth boundary.
- Eg—7 to 13 inches; dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) silt loam, light brownish gray (10YR 6/2) dry; weak thin platy structure parting to moderate fine granular; friable; many fine roots; few faint black (10YR 2/1) organic coatings on faces of peds and fillings in root channels; few fine prominent brown (7.5YR 4/4) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Bt1—13 to 17 inches; grayish brown (10YR 5/2) and brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; few fine prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Bt2—17 to 25 inches; grayish brown (10YR 5/2) and brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots; common faint dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) clay films on faces of peds; common faint light gray (10YR 7/2) (dry) clay depletions on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; few fine prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.
- Btg1—25 to 35 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots; many faint grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; many fine black (10YR 2/1) iron and manganese oxide concretions throughout; common fine prominent strong brown (7.5YR 5/6 and 5/8) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.
- Btg2—35 to 44 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium and coarse subangular and angular blocky structure; firm; few fine roots; common faint grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) clay depletions on faces of peds; many fine black (10YR 2/1) iron and manganese oxide nodules and concretions throughout; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
- Btg3—44 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium and coarse angular blocky structure; firm; few fine roots; few prominent gray (N 5/) clay films on faces of peds; many fine black (10YR 2/1) iron and manganese oxide nodules and concretions throughout; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

- 2Btg4—49 to 58 inches; grayish brown (2.5Y 5/2) and light brownish gray (2.5Y 6/2) loam; weak coarse angular blocky structure; firm; few prominent dark gray (N 4/) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.
- 2C—58 to 60 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/4) sandy loam; massive; friable; common fine distinct dark gray (10YR 4/1) and gray (10YR 5/1) iron depletions in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the loess or other silty material: 40 to 60 inches

Depth to carbonates: 45 to 70 inches

Depth to the base of soil development: 42 to 70 inches

Ap or A horizon:

Hue-10YR

Value-2 or 3

Chroma—1 or 2

Texture—silt loam

E or Eg horizon:

Hue-10YR

Value-4 to 6

Chroma—1 or 2

Texture—silt loam

Bt or Btg horizon:

Hue-10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma-2 to 4

Texture—silty clay loam

2Bt, 2Btg, 2BC, or 2BCg horizon:

Hue—10YR, 2.5Y, or 5Y

Value-4 to 6

Chroma-2 to 8

Texture—loam, clay loam, sandy loam, silty clay loam, or silt loam

Content of gravel—less than 10 percent

2C or 2Cg horizon:

Hue-10YR or 2.5Y

Value-4 to 6

Chroma—2 to 8

Texture—loam, sandy loam, sandy clay loam, silt loam, clay loam, or loamy sand

Content of gravel—less than 15 percent

104A—Virgil silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and ground moraines Position on the landform: Footslopes and summits

Map Unit Composition

Virgil and similar soils: 90 percent Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have a lighter colored surface layer
- Soils that have a thicker surface layer
- Soils that have outwash within a depth of 40 inches
- Soils that have a seasonal high water table at a depth of more than 2 feet *Dissimilar soils:*
- The well drained Batavia soils on summits
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Virgil Soil

Parent material: Loess and the underlying outwash

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.3 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: 0.5 foot to 2.0

feet, January through May

Ponding: None Flooding: None

Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1

Prime farmland category: Prime farmland where drained

Hydric soil status: Not hydric

W—Water

• This map unit consists of natural bodies of water, such as ponds, lakes, and rivers.

Warsaw Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls

Taxadjunct features: The Warsaw soil in map unit 290C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Warsaw silt loam, 0 to 2 percent slopes; at an elevation of 535 feet; 1,800 feet south and 620 feet west of the northeast corner of sec. 9, T. 33 N., R. 9 E.; Will County, Illinois; USGS Wilmington topographic quadrangle; lat. 41 degrees 21 minutes 27

seconds N. and long. 88 degrees 11 minutes 39 seconds W., NAD 27; UTM Zone 16, 400106E and 4579132N, NAD 83:

- Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many very fine roots; 2 percent gravel; slightly acid; clear smooth boundary.
- A—7 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium granular structure; friable; many very fine roots; common distinct black (10YR 2/1) organic coatings on faces of peds; 2 percent gravel; slightly acid; clear smooth boundary.
- 2BA—11 to 17 inches; brown (10YR 4/3) loam; moderate fine subangular blocky structure; friable; many very fine roots; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; 5 percent gravel; moderately acid; clear smooth boundary.
- 2Bt1—17 to 28 inches; dark yellowish brown (10YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; 5 percent gravel; moderately acid; clear wavy boundary.
- 3Bt2—28 to 32 inches; dark yellowish brown (10YR 4/4) gravelly sandy clay loam; weak fine and medium subangular blocky structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds; common fine black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; 20 percent gravel; neutral; clear wavy boundary.
- 3C1—32 to 44 inches; yellowish brown (10YR 5/4) gravelly loamy sand; massive; very friable; few very fine roots; 20 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.
- 3C2—44 to 80 inches; light yellowish brown (10YR 6/4) very gravelly sand; single grain; loose; 40 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to sandy and gravelly glaciofluvial deposits: 24 to 40 inches

Depth to carbonates: 24 to 40 inches

Depth to the base of soil development: 24 to 40 inches

Ap and A horizons:

Hue-10YR or 7.5YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam, loam, or sandy loam Content of gravel—less than 15 percent

2BA horizon (where present):

Hue—10YR or 7.5YR

Value—3 or 4

Chroma-2 to 4

Texture—silt loam, loam, or sandy loam

Content of gravel—less than 15 percent

2Bt horizon:

Hue—10YR or 7.5YR

Value—3 to 5

Chroma—2 to 4

Texture—silt loam, loam, clay loam, sandy clay loam, or sandy loam

Content of gravel—less than 15 percent

3Bt horizon:

Hue—7.5YR or 10YR

Value—2 to 4

Chroma—2 to 4

Texture—gravelly clay loam or gravelly sandy clay loam

Content of gravel—15 to 25 percent

3C horizon:

Hue-7.5YR or 10YR

Value—5 to 7

Chroma—2 to 4

Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy

sand, coarse sand, or loamy coarse sand

Content of gravel-15 to 78 percent

290A—Warsaw silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces

Position on the landform: Summits

Map Unit Composition

Warsaw and similar soils: 90 percent

Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:

- Soils that have less sand and gravel in the lower part of the profile
- Soils that have less sand and more silt in the upper part of the profile
- Soils that do not have calcareous sand and gravel within a depth of 40 inches
- Soils that have slopes of more than 2 percent

Dissimilar soils:

Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Warsaw Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2s

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

290B—Warsaw silt loam, 2 to 4 percent slopes

Setting

Landform: Outwash plains and stream terraces Position on the landform: Backslopes and summits

Map Unit Composition

Warsaw and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that do not have calcareous sand and gravel within a depth of 40 inches
- Soils that have less sand and more silt in the upper part of the profile
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that have less sand and gravel in the lower part of the profile
- Soils that are moderately eroded

Dissimilar soils:

• Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Warsaw Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.8 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

290C2—Warsaw silt loam, 4 to 6 percent slopes, eroded

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Shoulders and backslopes

Map Unit Composition

Warsaw and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have slopes of less than 4 percent or more than 6 percent
- Soils that have less sand and gravel in the lower part of the profile
- Soils that have less sand and more silt in the upper part of the profile
- Soils that do not have calcareous sand and gravel within a depth of 40 inches
- · Soils that are severely eroded or only slightly eroded

Dissimilar soils:

• Somewhat poorly drained soils on summits and footslopes

Properties and Qualities of the Warsaw Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Very rapid Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

Wenona Series

Taxonomic classification: Fine, smectitic, mesic Oxyaquic Argiudolls

Taxadjunct features: The Wenona soils in map units 388B2 and 388C2 have a
thinner dark surface layer than is defined as the range for the series. This
difference, however, does not significantly affect the use and management of the
soils. These soils are classified as fine, smectitic, mesic Mollic Oxyaquic
Hapludalfs.

Typical Pedon

Wenona silt loam, 2 to 5 percent slopes; at an elevation of 718 feet; 324 feet east and 216 feet north of the southwest corner of sec. 8, T. 29 N., R. 2 E.; La Salle County, Illinois; USGS Minonk topographic quadrangle; lat. 40 degrees 59 minutes 07 seconds N. and long. 89 degrees 01 minute 35 seconds W., NAD 27; UTM Zone 16, 329543E and 4539089N, NAD 83:

- Ap—0 to 9 inches; very dark brown (10YR 2/2) silt loam, very dark grayish brown (10YR 3/2) dry; moderate fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.
- A—9 to 14 inches; very dark brown (10YR 2/2) silt loam, very dark grayish brown (10YR 3/2) dry; moderate fine and medium granular structure; friable; many fine and very fine roots; moderately acid; clear smooth boundary.
- Bt1—14 to 20 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots; many distinct dark brown (10YR 3/3) organo-clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt2—20 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
- Bt3—26 to 31 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese oxide nodules throughout; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
- Bt4—31 to 37 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; common distinct brown (10YR 4/3) clay films on faces of peds; few very fine roots; few fine black (10YR 2/1) iron and manganese oxide nodules throughout; common fine and medium faint brown (10YR 5/3) masses of iron accumulation in the matrix; common fine and medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.
- 2BCt—37 to 50 inches; olive (5Y 5/3) silty clay; weak medium prismatic structure parting to weak coarse subangular blocky; very firm; few fine roots; few faint olive gray (5Y 5/2) clay films on vertical faces of peds; common fine distinct and prominent yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation in the matrix; 5 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2Cd—50 to 60 inches; olive gray (5Y 5/2) silty clay; massive; very firm; common fine and medium distinct light olive brown (2.5Y 5/4) and few fine prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; 5 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches Thickness of the loess or other silty material: 35 to 55 inches Depth to the base of soil development: 40 to 65 inches

Ap and A horizons:

Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:

Hue-10YR

Value—4 to 6

Chroma—3 to 6

Texture—silty clay loam or silty clay

2Bt horizon:

Hue-2.5Y or 5Y

Value—4 to 6

Chroma-2 to 6

Texture—silty clay or silty clay loam

Content of gravel—less than 5 percent

2Cd horizon:

Hue-2.5Y or 5Y

Value—4 to 6

Chroma—2 to 4

Texture—silty clay or clay

Content of gravel—less than 5 percent

388B—Wenona silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes, summits, and footslopes

Map Unit Composition

Wenona and similar soils: 95 percent

Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that are less than 35 inches deep to till
- Soils that are more than 55 inches deep to till
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are moderately eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

The poorly drained Streator soils on toeslopes

Properties and Qualities of the Wenona Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 65 inches to dense material Available water capacity: About 9.6 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.5 to 4.5 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Low Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

388B2—Wenona silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines and lake plains

Position on the landform: Backslopes, summits, and footslopes

Map Unit Composition

Wenona and similar soils: 94 percent

Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that are less than 35 inches deep to till
- Soils that are more than 55 inches deep to till
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that are severely eroded or only slightly eroded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

• The poorly drained Streator soils on toeslopes

Properties and Qualities of the Wenona Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 65 inches to dense material Available water capacity: About 9.7 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet, February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Low

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland

Hydric soil status: Not hydric

388C2—Wenona silty clay loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines

Position on the landform: Backslopes and shoulders

Map Unit Composition

Wenona and similar soils: 92 percent

Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:

- Soils that have less clay and more silt in the control section
- Soils that are less than 35 inches deep to till
- Soils that are more than 55 inches deep to till
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have more clay in the surface layer
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:

- The nearly level, somewhat poorly drained Rutland soils on summits and footslopes
- The poorly drained Streator soils on toeslopes

Properties and Qualities of the Wenona Soil

Parent material: Loess or other silty material and the underlying till or lacustrine deposits

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 40 to 65 inches to dense material Available water capacity: About 10.0 inches to a depth of 60 inches Content of organic matter in the surface layer: 2.0 to 4.0 percent

Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2.0 to 3.5 feet,

February through April

Ponding: None Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium

Susceptibility to water erosion: Moderate Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 3e Prime farmland category: Prime farmland Hydric soil status: Not hydric

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses or describe specific management concerns. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the potential of the soils for the use. Terms for limitation classes are *not limited, somewhat limited,* and *very limited.* Terms indicating the potential of the soils for a given use are *good, fair,* and *poor.*

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Soil Series and Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

In 2002, La Salle County had 546,471 acres of cropland (U.S. Department of Commerce, 2002). The major row crops are corn and soybeans. The major small grain crop is wheat. Alfalfa is the major forage crop. Some areas are used for vegetable or nursery crops.

The soils in La Salle County have good potential for continued crop production, especially if the latest crop production technology is applied. This soil survey can be used as a guide in applying this technology.

Water erosion is a potential problem on approximately 31 percent of the cropland in the county. Erosion can be a problem on soils that have slopes of more than 2 percent, such as Plano, Rutland, and Catlin soils. It also is a hazard in less sloping areas if the slopes are long and runoff water is concentrated.

Loss of the surface layer through sheet and rill erosion is damaging for several reasons. Soil productivity is reduced as the surface soil is removed and part of the subsoil is incorporated into the plow layer. The subsoil is generally lower in content of plant nutrients and organic matter and higher in content of clay than the surface soil. As the amount of organic matter decreases and the content of clay increases in the plow layer, soil tilth deteriorates, resulting in soil crusting and a reduced rate of water infiltration. Under these conditions, preparing a good seedbed could be difficult. Erosion results in the sedimentation of streams, rivers, road ditches, and lakes. Sediment pollution reduces the quality of water for agricultural, municipal, and recreational uses and for fish and wildlife. Removing the sediment generally is expensive. Erosion control helps to minimize this pollution and improves water quality.

Erosion-control measures include both cultural and structural practices. The most widely used cultural practice in the county is conservation tillage, such as chisel plowing, no-till farming, or ridge planting. Conservation tillage systems leave a cover of crop residue on 20 to 90 percent of the surface. No-till farming is most effective on well drained and moderately well drained soils, such as Osco and Varna soils (fig. 10). Another common cultural practice is using a crop rotation that includes 1 or more years of close-growing grasses or legumes. If slopes are smooth and uniform, terraces and contour farming also are effective in controlling erosion.

Structural practices are needed in drainageways where concentrated runoff flows overland. Constructing grassed waterways or establishing erosion-control structures reduces the hazard of erosion (fig. 11). Further information about the erosion-control measures suitable for each kind of soil is provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Drainage systems have been installed in most areas of the poorly drained and somewhat poorly drained soils used as cropland in the county. Therefore, these soils are adequately drained for the crops commonly grown in the county. Measures that



Figure 10.—No-till soybeans in an area of Varna silt loam, 4 to 6 percent slopes, eroded. Planting on the contour and establishing grass-backed terraces help to control erosion in areas of this soil.

maintain the drainage system are needed. A subsurface drainage system has been installed in areas of poorly drained soils, such as Sable and Drummer soils. In some areas of poorly drained and very poorly drained soils, such as Bryce and Peotone soils, surface tile inlets or shallow surface ditches are needed to remove excess water. In places, somewhat poorly drained soils are wet long enough for productivity to be reduced in some years unless a drainage system is installed. A subsurface drainage system has been installed in areas of the somewhat poorly drained Muscatune and Elliott soils.

Restricted permeability can increase the susceptibility of a soil to erosion. As water movement slows within a soil, the runoff rate increases. The slowly permeable Swygert soils are more susceptible to erosion than the moderately permeable Osco soils. The effect that restricted permeability has on the erosion hazard can be reduced by applying a cropping system that leaves crop residue on the surface after planting, by incorporating green manure crops or crop residue into the soil, and by using conservation cropping systems.

Restricted permeability can limit the effectiveness of drainage systems. In order for the drainage system to be effective in lowering the seasonal high water table, tile must be more closely spaced in the slowly permeable Elliott soils than in the moderately permeable Muscatune soils.

Soil tilth is an important factor influencing the germination of seeds, the runoff rate, and the rate of water infiltration. Soils that have good tilth are granular and porous and have a high content of organic matter.

Poor tilth is a problem on soils that have a surface layer of silty clay loam or silty clay. Examples are Ashkum, Bryce, and Streator soils. If these soils are plowed when wet, the surface layer becomes cloddy. This cloddiness hinders the preparation of a



Figure 11.—A block chute erosion-control structure helps to prevent gullies in an area of Varna silt loam, 4 to 6 percent slopes, eroded, at the end of a farm field.

good seedbed. Tilling in the fall, leaving the soil surface rough, and leaving moderate amounts of crop residue on the surface generally result in good tilth in the spring. A system of strip or ridge tillage may also be effective in areas of these soils.

Crusting can be a problem in areas of Camden and Birkbeck soils, which have a surface layer of silt loam that is low in content of organic matter. Generally, the structure of these soils is weak, and a crust forms on the surface during periods of intense rainfall. This crust is hard when dry. It inhibits seedling emergence, reduces the infiltration rate, and increases the runoff rate and the hazard of erosion. Regular additions of crop residue, manure, and other organic material improve soil structure and minimize crusting.

A high pH within a depth of 40 inches can occur in Harpster, Spaulding, and Arrowsmith soils. The high soil reaction can reduce the uptake of some nutrients by the plants or cause other elements to accumulate to toxic levels. Incorporating green manure crops, manure, or crop residue into the soil, applying a system of conservation tillage, and using conservation cropping systems can help to minimize the harmful effects of this limitation.

A root-restrictive layer or bedrock limits the available water capacity of soils. Varna, Swygert, Channahon, and Gale soils have layers that restrict the penetration of plant roots. Increasing the rate of water infiltration, reducing the runoff rate, or planting drought-tolerant species can minimize the effects of this limitation. Planting cover crops and applying a system of conservation tillage that leaves crop residue on the surface after planting increase the rate of water infiltration and reduce the runoff rate. Planting drought-tolerant species, such as soybeans and winter wheat, is beneficial because these crops make the most efficient use of the limited amount of water.

Proper management is needed on hayland to prolong the life of desirable forage species, maintain or improve the quality and quantity of forage, and control erosion

and runoff. Hay may last as a vigorous crop for 4 to 5 years, depending on management and on the varieties seeded. Suitable hay plants include several legumes and cool-season grasses. Alfalfa is the most common legume grown for hay. It is often grown in mixtures with smooth bromegrass and orchardgrass. Alfalfa is best suited to moderately well drained soils, such as Blackberry and Catlin soils. Red clover also is grown for hay. Measures that maintain or improve fertility are needed. The amount of lime and fertilizer to be added to the soil should be based on the results of soil tests, the needs of the plants, and the expected level of yields. Seed varieties should be selected in accordance with the soil properties and the drainage conditions of the specific tract of land.

Overgrazing reduces the vigor of pasture plants and reduces forage production. It also increases the extent of weeds and brush. Deferred grazing, rotation grazing, and proper stocking rates help to prevent overgrazing. Deferred grazing allows the plants in pastures that are not being used to build up reserves of carbohydrates. Rotating grazing among several pastures allows each area a rest period (fig. 12).

Many of the soils in the survey area have a high water table in spring. Deferring grazing during wet periods can minimize surface compaction. Pasture renovation also helps to prevent compaction. Frost heave can damage alfalfa and red clover in areas that have a seasonal high water table. Leaving a cover of stubble 4 to 6 inches high during the winter and planting mixtures of grasses and legumes help to prevent frost heave.

Limitations Affecting Cropland and Pastureland

The management concerns affecting the use of the detailed soil map units in the survey area for crops and pasture are shown in table 6.

Cropland

The main concerns affecting the management of cropland in La Salle County are water erosion, wetness, ponding, crusting, poor tilth, restricted permeability, high pH, root-restrictive layer, limited available water capacity, excessive permeability, and depth to bedrock. Excess lime, wind erosion, flooding, and subsidence are additional management concerns.

Generally, a combination of several practices is needed to control water erosion. Conservation tillage, stripcropping, field windbreaks, contour farming, conservation cropping systems, crop residue management, terraces, diversions, grassed filter strips, and grassed waterways help to prevent excessive soil loss.

In some areas used as cropland, wetness and ponding are management concerns. Drainage systems consist of subsurface tile drains, surface inlet tile, open drainage ditches, or a combination of these. Measures that maintain the drainage system are needed.

Practices that minimize crusting and improve soil tilth include incorporating green manure crops, manure, or crop residue into the soil and using a system of conservation tillage. Surface cloddiness can be controlled by avoiding tillage when the soil is too wet.

Restricted permeability can be overcome by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems.

High pH and excess lime can be overcome by incorporating green manure crops, manure, or crop residue into the soil and by using conservation tillage and conservation cropping systems. Also, crops may respond well to additions of phosphate fertilizer on soils that have a high content of lime.

A root-restrictive layer in a soil and bedrock within a depth of 40 inches limit the total amount of water available to plants. These limitations cannot be easily overcome.



Figure 12.—A system of rotation grazing helps to prevent overgrazing. Pictured is an area of Atterberry silt loam, 0 to 2 percent slopes.

Planting cover crops and applying a system of conservation tillage that leaves crop residue on the surface after planting increase the rate of water infiltration, reduce the runoff rate, and conserve moisture. Also, planting drought-tolerant crop species makes the most efficient use of the limited supply of available water in the soil.

The effects of limited available water capacity can be minimized by reducing the evaporation and runoff rates and increasing the water infiltration rate. Applying conservation tillage and conservation cropping systems, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

Excessive permeability can cause deep leaching of nutrients and pesticides. Selecting appropriate chemicals and using split application methods reduce the hazard of ground-water contamination.

Wind erosion can be controlled by applying a system of conservation tillage that leaves crop residue on the surface after planting and by keeping the surface rough.

Flooding cannot be easily overcome. Winter small grain crops can be damaged by floodwater. Tilling and planting should be delayed in the spring until flooding is no longer a hazard. Dikes and diversions can reduce the extent of the crop damage caused by floodwater.

Subsidence occurs as a result of shrinkage from drying, consolidation because of the loss of ground water, compaction from tillage, wind erosion, burning, and biochemical oxidation. Limiting the amount of drainage, avoiding excessive tillage, avoiding tilling when the soil is wet, and using a system of conservation tillage that leaves crop residue on the surface after planting help to control subsidence.

The criteria used to determine some of the limitations or hazards in the table are described in the following paragraphs.

Crusting.—The average content of organic matter in the surface layer is 2.5 percent or less, and the content of clay in the surface layer is between 20 and 35 percent.

Depth to bedrock.—Bedrock is within a depth of 40 inches.

Excess lime.—The calcium carbonate equivalent is 15 percent or more within a depth of 16 inches.

Excessive permeability.—The lower limit of the permeability range within the soil profile is 6 inches or more per hour.

Flooding.—The soil is occasionally flooded or frequently flooded.

High pH.—The lower limit of the pH is 7.4 or more within a depth of 40 inches.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Ponding.—The water table is above the surface.

Poor tilth.—The lower limit of the clay content in the surface layer is 27 percent or more.

Restricted permeability.—Permeability is less than 0.2 inch per hour between the surface and a depth of 40 inches.

Root-restrictive layer.—Dense material is within a depth of 40 inches.

Subsidence.—The decrease in surface elevation is more than 0 inches.

Water erosion.—The Kw factor of the surface layer multiplied by the upper limit of the slope is 0.8 or more, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet.

Wind erosion.—The wind erodibility group (WEG) is 1 or 2.

Pastureland

The main concerns affecting the management of pastureland in La Salle County are water erosion, wetness, ponding, low pH, high pH, frost heave, root-restrictive layer, limited available water capacity, poor tilth, excessive permeability, depth to bedrock, excess lime, low fertility, wind erosion, equipment limitations, and flooding.

Water erosion is a hazard in pastured areas where the value of the Kw factor multiplied by the upper limit of the slope is 0.8 or more and the slope is 3 percent or more. Water erosion reduces the productivity of pasture. It also results in onsite and offsite sedimentation, causes water pollution by sedimentation, and increases the runoff of livestock manure and other nutrients. Establishing or renovating stands of legumes and grasses helps to control erosion. Controlling erosion during seedbed preparation is a major concern. If the soil is tilled for the reseeding of pasture or hay crops, planting winter cover crops, establishing grassed waterways, farming on the contour, and applying a system of conservation tillage that leaves crop residue on the surface can help to minimize erosion.

Wetness and ponding are management concerns in some areas of pasture or hayland. Wetness occurs when the seasonal high water table is within a depth of 1.5 feet, and ponding occurs when the seasonal high water table is above the surface. Drainage systems consisting of subsurface tile drains, surface inlet tile, open drainage ditches, or a combination of these help to lower the water table and remove excess water. Measures that maintain the drainage system are needed. Selecting species of grasses and legumes adapted to wet conditions improves forage production. Restricted use during wet periods helps to keep the pasture in good condition.

Soils that have low pH, or low reaction, have a pH value of 5.5 or less within a depth of 40 inches. Low pH inhibits the uptake of certain nutrients by the plants or accelerates the absorption of certain other elements to the level of toxic concentrations. Either of these conditions affects the health and vigor of the plants. Applications of lime should be based on the results of soil tests. The goal is to achieve the optimum pH level for the uptake of the major nutrients by the specific grass, legume, or combination of grasses and legumes.

In soils that have high pH, the lower limit of the pH range is 7.4 or more within a depth of 40 inches. Excess lime occurs in soils that have a calcium carbonate equivalent of 15 percent or more within a depth of 16 inches. The high soil reaction associated with these limitations can inhibit the uptake of certain nutrients and micronutrients by the plants or accelerates the absorption of certain other elements to the level of toxic concentrations. Either of these conditions affects the health and vigor of the plants. Applications of sulfate and phosphate compounds or additions of certain forms of nitrogen fertilizer help to lower the pH. Selecting species of grasses and legumes that are tolerant of high pH improves forage production.

Frost heave is a limitation in poorly drained and very poorly drained soils that have a moderate or high potential for frost action. It occurs when ice lenses or bands that drive an ice wedge between two layers develop near the surface layer of a soil. The ice wedges heave the overlying soil layer upward, snapping the roots. Soils that have a low content of sand have small pores that hold water and enable ice lenses to form. Selecting adapted forage and hay varieties can help to minimize the effects of frost heave. Timely deferment of grazing helps to maintain a protective cover that insulates the soil, thereby reducing the effects of frost heave.

Soils that have a root-restrictive layer have a dense layer of till within a depth of 40 inches. This layer inhibits root penetration. This limitation lowers the total amount of water that is available to plants. Deep-rooted perennial legumes and grasses make the most efficient use of the limited amount of available water. Selecting drought-tolerant species of legumes and grasses improves forage production.

Limited available water capacity occurs in areas where the available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less. Available water capacity refers to the capacity of soils to hold water available for use by most plants. The quality and quantity of the pasture plants may be reduced if the amount of available water is inadequate for maintenance of a healthy community of desired pasture species. The pasture cannot support the desired number of livestock. A poor-quality pasture may increase the hazard of water erosion and increase the runoff of pollutants. Planting drought-resistant species of grasses and legumes helps to establish a cover of vegetation. The plants should not be clipped or grazed until they are sufficiently established.

Poor tilth can occur in a soil where the lower limit of the clay content is 27 percent or more and the lower limit of the organic matter content is less than 3 percent. Overgrazing or grazing when the soil is wet reduces the extent of the plant cover and results in surface compaction and poor tilth and thus increases the susceptibility to erosion. Proper stocking rates, rotation grazing, and timely deferment of grazing, especially during wet periods, help to keep the pasture in good condition. Properly locating livestock watering facilities helps to prevent surface compaction or the formation of ruts by making it unnecessary for cattle to travel long distances up and down the steeper slopes.

Soils in which the depth to bedrock is 40 inches or less have a restricted root zone and a limited available moisture capacity. Planting adapted forage and hay varieties helps to overcome this limitation. The plants should not be clipped or grazed until they are sufficiently established. Rotation grazing and timely deferment of grazing help to maintain healthy stands of forage plants, which, in turn, reduce the runoff rate and thus conserve moisture.

Excessive permeability is a concern in areas where the lower limit of the permeability range is 6 or more inches per hour within the soil profile. Excessive permeability can cause deep leaching of nutrients and pesticides. Selecting appropriate chemicals and using split application methods can reduce the hazard of ground-water contamination when stands of legumes and grasses are established or renovated.

Low fertility occurs in areas where the average content of organic matter in the surface layer is 1 percent or less or the cation-exchange capacity (CEC) is 7 milliequivalents or less per 100 grams of soil. Low fertility affects the health and vigor of the plants and thus has a direct impact on the quantity and quality of livestock. Additions of fertilizer and other organic material should be based on the results of soil tests, on the needs of specific plant species, and on the desired level of production.

Organic and sandy soils that have a wind erodibility group (WEG) of 1 or 2 are susceptible to wind erosion. If the soil is tilled for the reseeding of pasture or hay crops, planting winter cover crops, applying a system of conservation tillage that leaves crop residue on the surface, and keeping the surface rough help to control wind erosion. Overgrazing or grazing when the soil is wet reduces the extent of the plant cover and thus increases the susceptibility to wind erosion. Proper stocking rates, rotation grazing, and timely deferment of grazing, especially during wet periods, help to keep the pasture in good condition.

The use of equipment is limited in areas where the average slope is more than 10 percent. This limitation can cause rapid wear of equipment and can hinder fertilization, harvesting, pasture renovation, and seedbed preparation. It cannot be easily overcome.

Frequent or occasional flooding can damage forage stands and delay harvesting in some years. Dikes and diversions help to control the extent of damage caused by floodwater. Selecting species of grasses and legumes adapted to wet conditions improves forage production. Restricted grazing during wet periods helps to keep the pasture in good condition.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 7. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered (Olson and Lang, 2000; Olson and others, 2000).

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Yields for grass-legume pasture under an average level of management also are shown in table 7. Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields in the table reflect the productive capacity of each soil for each of the principal crops and pasture plants. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 7 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local

office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, or wildlife habitat.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally

designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section "Soil Series and Detailed Soil Map Units" and in the yields table.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

About 601,932 acres, or nearly 81 percent of the total acreage in La Salle County, meets the requirements for prime farmland.

The map units in the survey area that are considered prime farmland are listed in table 8. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 5. The location is shown on the detailed soil maps. Some of the soil qualities that affect use and management are described under the heading "Soil Series and Detailed Soil Map Units."

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological

wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform. Table 9 lists the map units that include hydric soils, either as major components or as soils of minor extent. The hydric soils listed in the table meet the definition of a hydric soil and have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and Vasilas, 2006).

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

- 1. All Histels except for Folistels, and Histosols except for Folists.
- 2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
 - B. are poorly drained or very poorly drained and have either:
 - a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches,

- 2) a water table at a depth of 0.5 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
- 3) a water table at a depth of 1.0 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is less than 6.0 in/hr in any layer within a depth of 20 inches.
- Soils that are frequently ponded for long or very long duration during the growing season.
- 4. Soils that are frequently flooded for long or very long duration during the growing season.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, yards, fruit trees, gardens, and cropland from wind and snow; help to keep snow on fields; and provide food and cover for wildlife. Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 10 shows the height that locally grown trees and shrubs are expected to reach in 20 years on soils in the survey area. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service or from a commercial nursery.

Forestland Productivity and Management

Forest once covered 15 percent of the land in La Salle County, or about 112,000 acres. Today, around 5 percent of the county, or 39,300 acres, is forestland (Schmidt and others, 2000). When La Salle County was first settled, the major river valleys, the bluffs above them, and much of the upland near the major streams were forested. Most of the forest was cleared for agriculture. Over the past century, new forests have been created only by natural succession of fallow upland and bottom-land areas, by abandonment of low-yielding cropland, and by seeding or planting of seedlings. Areas of grazed forestlands are slowly recovering but may require many decades or a full forest generation in order to become productive with or without management. As the demographics of the county change and additional time passes, these forestation realities will continue to be significant.

Principal forest cover types in La Salle County include oak-hickory (14,000 acres), maple-beech (19,600 acres), and elm-ash-cottonwood (5,700 acres) (Schmidt and others, 2000). Among these principal forest types and other minor cover associations, many different tree and shrub species are represented in the county.

The county has tremendous potential for establishing additional productive forestland. Areas classified as highly erodible land (HEL) would be especially well suited to hardwood forest. Forestry in the county is not only potentially profitable but also serves to protect and enhance watershed quality, recreation, botanical resources, wildlife habitat, and establishment in

the county is moderate. Wooded parcels as small as 5 acres can be effectively managed for both timber production and multi-resource conservation if desired.

Assistance in establishing, improving, or managing forestland is available from foresters or specialists in natural resources. Detailed information regarding forest resources is available from the Forestry Department of the Illinois Department of Natural Resources.

Forestland Productivity

Table 11 can help woodland owners or forest managers plan the use of soils for wood crops. Only those soils commonly used for wood crops are listed.

The potential productivity of merchantable or common trees on a soil is expressed as a site index and as a volume number. The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or online at http://soils.usda.gov/technical.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Suggested trees to plant are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

The tables described in this section rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Harvest Equipment Considerations

Table 12 provides information regarding the use of harvest equipment in areas used as forestland.

For most soils spring is the most limiting season. Alternate thawing and freezing during snowmelt cause saturation and low strength of the surface soil layers. When thawing is complete, saturation continues for short periods in well drained soils to nearly all year in very poorly drained soils in depressions. Degrees of wetness are generally proportionate to the depth at which a seasonal high water table occurs and the duration of the high water table. The water table generally is lower in the summer during the heavy use of moisture by vegetation and is nearer to the surface during periods when absorbed precipitation is greater than the vegetation requires. Harvesting during periods of saturation usually results in severe soil damage, except when the soil is frozen. The preferred season for timber harvest on many soils is winter, when wetness and low soil strength can be overcome by freezing.

Considerations shown in the table are as follows:

Slope.—The upper limit of the slope range is more than 15 percent.

Flooding.—The soil is frequently flooded.

Wetness.—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched water table (any drainage class).

Depth to hard bedrock.—The depth to hard bedrock is less than 10 inches.

Rubbly surface.—The word "rubbly" is in the map unit name.

Surface stones.—The words "extremely stony" are included in the description of the surface layer, or 3 percent or more of the soil surface is covered with stones.

Surface boulders.—The word "bouldery" is included in the description of the surface layer, or 0.01 percent or more of the soil surface is covered with boulders.

Susceptible to rutting and wheel slippage (low strength).—The AASHTO classification is A-6, A-7, or A-8 in any layer at a depth of 20 inches or less.

Poor traction (loose sandy material).—The USDA texture includes sands or loamy sands in any layer at a depth of 10 inches or less.

Forest Log Landing Considerations

Table 13 provides information regarding the use of the soils as log landings. Log landings are areas where logs are assembled for transportation. Areas that require little or no cutting, filling, or surface preparation are desired.

Considerations shown in the table are as follows:

Slope.—The slope is more than 6 percent.

Flooding.—The soil is occasionally flooded or frequently flooded.

Wetness.—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched water table (any drainage class).

Surface boulders.— The word "bouldery" is included in the description of the surface layer, or 0.01 percent or more of the soil surface is covered with boulders.

Susceptible to rutting and wheel slippage (low strength).—The AASHTO classification is A-6, A-7, or A-8 in any layer at a depth of 20 inches or less.

Rubbly surface.—The word "rubbly" is in the map unit name.

Forestland Site Preparation and Planting Considerations

Table 14 provides information regarding considerations affecting site preparation and planting in areas used as forestland.

Considerations shown in the table are as follows:

Slope.—The upper limit of the slope range is more than 15 percent.

Flooding.—The soil is frequently flooded.

Wetness.—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched water table (any drainage class).

Depth to hard bedrock.—The depth to hard bedrock is less than 20 inches.

Surface stones.— The word "stony" is included in the description of the surface layer, or 0.01 percent or more of the soil surface is covered with stones.

Surface boulders.— The word "bouldery" is included in the description of the surface layer, or 0.01 percent or more of the soil surface is covered with boulders. Water erosion.—The slope is 8 percent or more.

Potential poor tilth and compaction.—The AASHTO classification is A-6 or A-7 in the upper 10 inches.

Rubbly surface.—The word "rubbly" is in the map unit name.

Cobbly surface.— The word "cobbly" is included in the description of the surface layer, or 0.1 percent or more of the surface is covered with cobbles.

Recreation

La Salle County offers a wide variety of recreational facilities, including State parks, nature preserves, fish and wildlife areas, and county parks. Starved Rock State Park provides an assortment of outdoor activities, including boating, canoeing, fishing, hiking, biking, camping, picnicking, snowmobiling, and cross-country skiing. Some other areas of interest include Buffalo Rock State Park (fig. 13), Sandy Ford Nature Preserve, La Salle Lake Fish and Wildlife Area, and Catlin County Park. The Illinois and Michigan Canal National Heritage Corridor runs through the county. The canal runs from Chicago to the city of Peru. It provides many recreational opportunities for

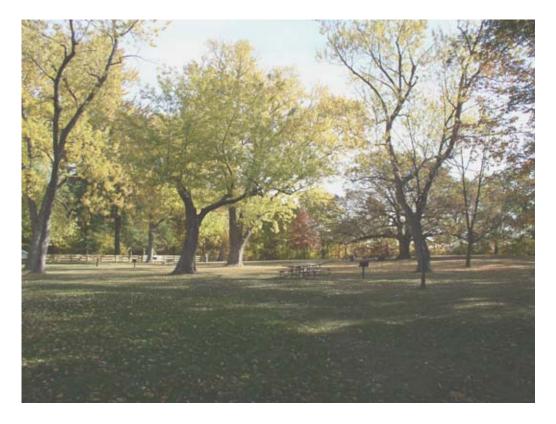


Figure 13.—A picnic area in Buffalo Rock State Park in an area of Marseilles silt loam, 2 to 5 percent slopes.

the county and the surrounding region. Most municipalities in the county offer a variety of recreational facilities and activities. The Illinois, Fox, and Vermilion Rivers and other lakes and streams in the county provide opportunities for additional recreational activities.

The soils of the survey area are rated in tables 15a and 15b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public

sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 15a and 15b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is

established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

La Salle County hosts a wide variety of wildlife. Past geologic conditions have played a significant role in soil formation and topography, and a wide variety of soils have developed. These soils have given rise to many different habitat types. Areas that sustain plentiful amounts of high quality habitat contain both common and unique types of wildlife, some that are even threatened or endangered. Throughout La Salle County, soils directly affect the potential for habitat development and thus the numbers and types of wildlife that might eventually use these habitat types.

Habitat types can be grouped into four major categories—grasslands, woodlands, wetlands, and row crops. Although not normally considered a habitat type, row crops make up a significant portion of the land mass of La Salle County and in many areas are the only available habitat of any significance for miles.

Grasslands generally are grouped as cool-season grasses (hay-type grasses, such as brome, fescue, rye, and timothy) and warm-season grasses (prairie grasses, such as big bluestem, switchgrass, and indiangrass). Both types of grasses and their associated herbaceous plants (flowers) can produce good habitat for wildlife if managed properly (fig. 14). Wildlife that inhabit these areas include eastern meadowlark, horned lark, pheasant, bobwhite quail, kestrel, red-tailed hawk, northern harrier, sandhill crane, plains pocket gopher, meadow vole, 13-lined ground squirrel, coyote, badger, white-tailed deer, American toad, and hog-nosed snake.

Many types of wildlife are exclusively dependent on woodland habitat, but some may use woodlands only on a more temporary or seasonal basis. Woodlands can be broken down according to their position on bottom land or in the uplands. Bottom-land forestland stands occur throughout the county and range from very small to very large. The trees and shrubs in these stands are specially adapted to somewhat wet to very wet conditions. The rest of the woodlands are dominated by trees and shrubs that grow in areas of the better drained soils. A wide variety of tree and shrub species can grow throughout the county. Examples of woodland wildlife include white-tailed deer, eastern wild turkey, pileated woodpecker, gray squirrel, fox squirrel, red fox, smooth green snake, flying squirrel, and gray tree frog.

Wetlands range from cattail marshes to areas of open water, such as rivers, ponds, and small lakes. Shallow water areas are typically very productive habitats that support large numbers and many types of wildlife. Plants that grow in wetland areas have developed under wet conditions and are tolerant of excess moisture. River habitat in La Salle County consists of the Illinois, Vermilion, and Fox Rivers and their tributaries. Much of this habitat is of high quality and contains numerous threatened and endangered species of plants and animals. A wide assortment of species all use wetland habitat at one time or another. Some common species that frequent areas of wetland habitat are great blue heron, red-winged blackbird, mink, beaver, muskrat, northern water snake, common snapping turtle, soft-shelled turtle, bull frog, walleyed-pike, river redhorse, and quillback.

Areas of cropland are not available as year-round habitat, but they provide temporary habitat for much of the year. Certain species, such as pheasant and killdeer, can actually thrive with little other habitat as long as they are able to nest successfully. Most wildlife using habitat types adjacent to cropland areas make use of



Figure 14.—Warm-season grasses provide food and cover for a variety of wildlife. Catlin silt loam, 2 to 5 percent slopes, is in the foreground, and Ross loam, 0 to 2 percent slopes, occasionally flooded, is in the background.

cropped areas for food either directly or indirectly. Species that thrive in and around cropped areas with interspersed habitat include pheasants, killdeer, lark sparrow, kestrel, pocket gopher, white-tailed deer, and badgers.

Assistance with wildlife habitat projects is available from various local, State, and Federal agencies, including the Illinois Department of Natural Resources, the U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, and the local Soil and Water Conservation District.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 16, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that

limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs. Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 17a and 17b show the degree and kind of soil limitations that

affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 18a and 18b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious

soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading

required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 19a and 19b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and sand are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 19a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 19b, the rating class terms are *good*, *fair*, and *poor*. The features that limit the soils as sources of reclamation material, roadfill, and topsoil are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of these materials. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of

reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Tables 20a, 20b, and 20c give information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; aquifer-fed excavated ponds; grassed waterways; terraces and diversions; drainage; and irrigation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Table 20a

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Table 20b

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock affect the construction of grassed waterways. A hazard of wind erosion, a low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Drainage is used in some areas to remove excess subsurface and surface water from the soil. The ratings in the table apply to undisturbed soils that commonly have a seasonal high water table within a depth of about 3.5 feet. Current land use is not considered in the ratings. Depth to bedrock, a dense layer, or a cemented pan, the content of large stones, and the content of clay influence the ease of digging, filling, and compacting. A seasonal high water table, ponding, and flooding may restrict the period when excavations can be made. The slope influences the use of machinery. Soil texture and depth to the water table influence the resistance to sloughing. Subsidence of organic layers influences grade and stability of tile drains. Limitations affecting areas where the tile line passes through soils in which the water table is generally below a

depth of 3.5 feet are provided in the table that includes the column "shallow excavations," which is described under the heading "Building Site Development."

Table 20c

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 21 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 22 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content

at ¹/₃- or ¹/₁₀-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (Ksat) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 22, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factors are shown in table 22 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor *T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook" (available online at http://soils.usda.gov).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 23 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 24 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained

soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 24 indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency of flooding are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Water table refers to a saturated zone in the soil. Table 24 indicates the depth to the top (upper limit) and base (lower limit) of the saturated zone for the specified months in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

The table also shows the *kind of water table*, that is, apparent or perched. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Soil Features

Table 25 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, **soil**. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay. **Aspect.** The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

- **Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.
- **Base slope** (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).
- **Bedding plane.** A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.
- **Bedding system.** A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.
- **Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- **Bedrock-controlled topography.** A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.
- **Bench terrace.** A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.
- **Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.
- Bottom land. An informal term loosely applied to various portions of a flood plain.
- **Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- **Breaks.** A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.
- **Breast height.** An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.
- **Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- **Cable yarding.** A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.
- **Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.
- **Canopy.** The leafy crown of trees or shrubs. (See Crown.)
- **Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

- **Catena.** A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.
- **Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- **Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. See Terracettes.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals. **Chiseling.** Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting

crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

- **Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
- Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."
- **Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.
- **Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.
- **Coprogenous earth (sedimentary peat).** A type of limnic layer composed predominantly of fecal material derived from aquatic animals.
- **Corrosion** (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.
- **Corrosion** (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
- **Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
- **Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.
- **Cropping system.** Growing crops according to a planned system of rotation and management practices.
- **Cross-slope farming.** Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.
- **Crown.** The upper part of a tree or shrub, including the living branches and their foliage.
- Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.
- **Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.
- **Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.
- Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.
 Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

- **Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
- **Diamicton.** A generic term for any nonlithified, nonsorted or poorly sorted sediment that contains a wide range of particle sizes, such as coarse fragments contained within a fine earth matrix (e.g., till); used when the genetic content of the sediment is uncertain.
- **Diatomaceous earth.** A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.
- **Dip slope.** A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.
- **Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
- **Divided-slope farming.** A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.
- Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."
- **Drainage, surface.** Runoff, or surface flow of water, from an area.
- **Drainageway.** A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.
- **Draw.** A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.
- **Drift.** A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.
- **Drumlin.** A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.
- **Duff.** A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.
- **Dune.** A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

- Earthy fill. See Mine spoil.
- **Ecological site.** An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/ or proportion of species or in total production.
- **Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.
- **Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.
- **Eolian deposit.** Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.
- **Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.
- **Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.
- **Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
 - *Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
 - *Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.
- **Erosion pavement.** A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.
- **Erosion surface.** A land surface shaped by the action of erosion, especially by running water.
- **Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.
- **Esker.** A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.
- **Extrusive rock.** Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.
- **Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.
- **Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.
- **Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable

- according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.
- **Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.
- **Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.
- Fine textured soil. Sandy clay, silty clay, or clay.
- **Firebreak.** An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.
- **First bottom.** An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.
- **Flaggy soil material.** Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.
- **Flagstone.** A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.
- **Flood plain.** The nearly level plain that borders a stream and is subject to flooding unless protected artificially.
- **Flood-plain landforms.** A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, floodplain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees
- **Flood-plain splay.** A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.
- **Flood-plain step.** An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.
- **Fluvial.** Of or pertaining to rivers or streams; produced by stream or river action.
- **Foothills.** A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).
- **Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).
- Forb. Any herbaceous plant not a grass or a sedge.
- **Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.
- **Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.
- **Fragipan.** A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.
- **Genesis**, **soil**. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

- **Glaciolacustrine deposits.** Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.
- **Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.
- **Graded stripcropping.** Growing crops in strips that grade toward a protected waterway.
- **Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.
- **Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.
- **Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.
- **Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.
- **Ground water.** Water filling all the unblocked pores of the material below the water table.
- **Gully.** A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.
- **Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
- **Hard to reclaim** (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.
- **Hardpan.** A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.
- **Head slope** (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.
- **Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.
- **High-residue crops.** Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.
- **Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.
- **Hillslope.** A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.
- **Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil

horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

- **Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.
- **Hydrologic soil groups.** Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.
- **Igneous rock.** Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).
- **Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.
- **Impervious soil.** A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.
- **Increasers.** Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.
- **Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.
- **Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.
- **Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

- Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.
- **Interfluve** (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.
- Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.
- **Invaders.** On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface

of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Ksat. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at ¹/₃- or ¹/₁₀-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

- **Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.
- Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.
- **Metamorphic rock.** Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.
- **Mine spoil.** An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.
- **Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.
- **Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.
- **Miscellaneous area.** A kind of map unit that has little or no natural soil and supports little or no vegetation.
- **Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.
- Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.
- **Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.
- **Moraine.** In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.
- **Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.
- Mottling, soil. Irregular spots of different colors that vary in number and size.

 Descriptive terms are as follows: abundance—few, common, and many; size—fine, medium, and coarse; and contrast—faint, distinct, and prominent. The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).
- **Muck.** Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)
- **Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.
- **Natric horizon.** A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.
- **Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)
- **Nodules.** See Redoximorphic features.
- **Nose slope** (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slopewash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash. Stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *plowpan*, and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block. **Pedisediment.** A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic. **Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

- Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:
 - 1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
 - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; and
 - B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
 - C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
 - 2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
 - A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; and
 - B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
 - 3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

- **Rill.** A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.
- **Riser.** The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

- **Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
- **Root zone.** The part of the soil that can be penetrated by plant roots.
- **Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called groundwater runoff or seepage flow from ground water.
- **Saline soil.** A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.
- **Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
- **Sandstone.** Sedimentary rock containing dominantly sand-sized particles.
- **Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
- Saturated hydraulic conductivity (Ksat). See Permeability.
- **Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
- **Scarification.** The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.
- Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.
- **Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
- **Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
- **Shale.** Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.
- **Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- **Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.
- **Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- **Side slope** (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.
- **Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- **Silica-sesquioxide ratio.** The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.
- **Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05

- millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
- **Siltstone.** An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.
- **Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
- **Sinkhole.** A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.
- **Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
- **Slickensides** (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.
- **Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.
- Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.
- **Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.
- **Sodium adsorption ratio (SAR).** A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.
- **Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.
- **Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.
- **Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clav	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

- Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.
- **Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.
- **Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.
- **Strath terrace.** A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).
- **Stream terrace.** One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.
- **Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.
- Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—platy (laminated), prismatic (vertical axis of aggregates longer than horizontal), columnar (prisms with rounded tops), blocky (angular or subangular), and granular. Structureless soils are either single grain (each grain by itself, as in dune sand) or massive (the particles adhering without any regular cleavage, as in many hardpans).
- **Stubble mulch.** Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.
- **Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth. **Subsoiling.** Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.
- **Substratum.** The part of the soil below the solum.
- Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer. Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.
- **Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.
- **Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."
- **Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.
- **Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to

- be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.
- **Terminal moraine.** An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.
- **Terrace** (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
- **Terrace** (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.
- **Terracettes.** Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.
- **Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."
- **Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use
- **Till.** Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.
- **Till plain.** An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.
- **Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
- **Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
- **Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- **Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
- **Tread.** The flat to gently sloping, topmost, laterally extensive slope of terraces, floodplain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.
- **Upland.** An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.
- **Valley fill.** The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.
- **Variegation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

- **Varve.** A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.
- **Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.
- **Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.
- **Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.
- **Wilting point (or permanent wilting point).** The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
- Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation
(Recorded in the period 1971-2000 at Ottawa, Illinois)

	 		5	Temperature			Precipitation				
			 	2 years in			 	2 years in 10 will have		 	
Month	daily	Average daily minimum 	Average 	Maximum	 Minimum temperature lower than	Average number of growing degree days*		Less		Average number of days with 0.10 inch or more	snowfal
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	 30.8 	 14.0 	 22.4 	 56 	-16	 0 	 1.49 	 0.73 	 2.13 	4	 8.7
February	37.1	19.5	28.3	65	-11	2	1.32	.59	1.95	3	5.1
March	 49.1 	 29.9 	 39.5 	 80 	 6	 34 	 2.60	 1.12 	 3.85	 6	 2.9
April	62.4	39.8	51.1	87	19	133	3.44	1.94	4.79	6	.6
May	 73.9	 50.8	 62.3	 92	 32	 378 	4.00	2.34	 5.69	 6	.0
June	82.4	60.4	71.4	96	43	633	4.13	1.94	6.28	6	.0
July	 85.3	 64.6	 74.9	 99 	 49	 759 	3.63	1.64	 5.47	 5	.0
August	 83.6	62.5	73.0	97	48	703	3.78	1.72	5.64	6	.0
September	77.4	54.2	65.8	95 	36	 470	3.49	1.74	5.02	5 5	.0
October	65.8	42.5	 54.1	 87	24	183	2.59	1.32	3.62	5	.0
November	 49.5	31.9	40.7	 75	10	 32	2.94	1.32	4.39	5	1.0
December	 36.1	20.1	28.1	63	- 9	 4 	2.27	1.09	3.38	 5	6.0
Yearly:	 	 	 	 		 	 		 		
Average	 61.1 	 40.8 	 51.0	 		 	 	 	 		
Extreme	104	-25	 	100	-18	 					
Total	 		 			3,331	35.68	30.04	 41.32	62	24.3

^{*} A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall (Recorded in the period 1971-2000 at Ottawa, Illinois)

į I	Temperature					
Probability	24	Op.	28	Op.	 32 °F	
	or lo	_	or lo	_	or lo	
			[
Last freezing temperature in spring:			 		 	
 1 year in 10			 		 	
later than	Apr.	15	Apr.	20	May	9
2 years in 10						
later than	Apr.	9	Apr.	16	May	3
5 years in 10						
later than	Mar.	29	Apr.	8	Apr.	22
First freezing temperature in fall:			 		 	
1 year in 10			 		 	
earlier than	Oct.	24	Oct.	12	Oct.	1
2 years in 10						
earlier than	Oct.	28	Oct.	17	Oct.	6
5 years in 10			į			
earlier than	Nov.	6	Oct.	28	Oct.	15

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Ottawa, Illinois)

	Daily minimum temperature during growing season			
Probability				
	Higher	Higher	Higher	
	than	than	than	
	24 °F	28 °F	32 °F	
	Days	Days	Days	
9 years in 10	199	181	155	
8 years in 10	207	188	162	
5 years in 10	221	203	176	
2 years in 10	235	217	191	
1 year in 10	243	225	198	

Table 4.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	 Family or higher taxonomic class
Alvin	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
	Fine-silty, mixed, superactive, mesic Aquic Hapludalfs
	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Ashkum	Fine, mixed, superactive, mesic Typic Endoaquolls
Atterberry	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Barony	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Batavia	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Beecher	Fine, illitic, mesic Udollic Epiaqualfs
	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
-	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine, illitic, mesic Aeric Epiaqualfs
	Mesic, uncoated Typic Quartzipsamments
	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
_	Fine, mixed, superactive, mesic Vertic Endoaquolls Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
	Fine-silty, mixed, superactive, mesic Typic Hapludalis
_	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Inception
	Hapludalfs
	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
*Catlin	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Channahon	Loamy, mixed, superactive, mesic Lithic Argiudolls
*Channahon	Coarse-loamy, mixed, superactive, mesic Typic Argiudolls
Chatsworth	Fine, illitic, mesic Oxyaquic Eutrudepts
Chenoa	Fine, illitic, mesic Aquic Argiudolls
	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine, illitic, mesic Aquollic Hapludalfs
	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
	Coarse-loamy, mixed, superactive, mesic Dystric Eutrudepts Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Mollic
Diesden	Hapludalfs
Drummer	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
_	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Elliott	Fine, illitic, mesic Aquic Argiudolls
*Elliott	Fine, illitic, mesic Aquollic Hapludalfs
Elpaso	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Faxon	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
-	Fine, smectitic, mesic Aquic Argiudolls
Fox	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic
	Hapludalfs
	Fine, illitic, mesic Udollic Epiaqualfs
	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Typic
	Hapludalfs
	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
-	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
	Fine-silty, mixed, superactive, mesic Mollic Hapitudalis Fine-silty, mixed, superactive, mesic Typic Calciaquolls
	Fine-silty, mixed, superactive, mesic Typic Carciaquolis
_	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
	Fine-loamy, mixed, active, mesic Typic Eutrudepts
-	Coarse-loamy, mixed, active, mesic Typic Argiudolls
	Euic, mesic Typic Haplosaprists
-	Loamy, mixed, superactive, mesic Lithic Endoaquolls

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Kaneville	 Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Kendall	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Kernan	Fine, smectitic, mesic Aeric Epiaqualfs
Kidami	Fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs
La Rose	Fine-loamy, mixed, active, mesic Typic Argiudolls
	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
	Euic, mesic Typic Haplosaprists
	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
	Fine-silty, mixed, superactive, mesic Aquollic Hapludalfs
	Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Typic Argiudolls
	Fine-silty, mixed, active, mesic Typic Hapludalfs
_	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
-	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
	Fine, mixed, active, mesic Typic Argiaquolls
	Fine-loamy, mixed, active, mesic Aquic Argiudolls
	Fine-loamy, mixed, superactive, mesic Oxyaquic Argiudolls
	Fine-cloamy, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
_	Fine-silty, mixed, superactive, calcareous, mesic Mollic Fluvaquents
	Fine-silty, mixed, superactive, mesic Aquic Argiudolls Fine, illitic, mesic Aeric Epiaqualfs
	Fine, illitic, mesic Aeric Epiaquairs Fine, illitic, mesic Aquic Hapludalfs
	Loamy, mixed, active, mesic Lithic Hapludalfs
	Fine, mixed, semiactive, acid, mesic Typic Udorthents
	Fine, mixed, active, nonacid, mesic Aquic Udorthents
	Fine-loamy, mixed, active, nonacid, mesic Oxyaquic Udorthents
_	Fine-silty, mixed, superactive, mesic Typic Argiudolls
	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
	Fine, illitic, mesic Oxyaquic Hapludalfs
	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Plano	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Proctor	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Proctor	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Psamments	Mixed, mesic Udipsamments
Rantoul	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
Ridgeville	Coarse-loamy, mixed, superactive, mesic Aquic Argiudolls
Ritchey	Loamy, mixed, superactive, mesic Lithic Hapludalfs
Rodman	Sandy-skeletal, mixed, mesic Typic Hapludolls
	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
	Fine, smectitic, mesic Aquic Argiudolls
	Fine, smectitic, mesic Aquollic Hapludalfs
	Fine, smectitic, mesic Aeric Epiaqualfs
	Fine-silty, mixed, superactive, mesic Typic Endoaquells
	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
	Fine-loamy, mixed, superactive, mesic Typic Endoaquolis Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
_	Fine-silty, mixed, superactive, mesic Typic Calciaquolls
-	Fine-silty, mixed, superactive, mesic Typic Calciaquois
	Fine, illitic, mesic Oxyaquic Hapludalfs
	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
	Fine, smectitic, mesic Vertic Endoaquolls
	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Stronghurst	
-	Fine, smectitic, mesic Aquollic Hapludalfs
Sunbury	Fine, smectitic, mesic Aquollic Hapludalfs Fine, mixed, active, mesic Aquic Arquidolls
Sunbury Swygert	Fine, mixed, active, mesic Aquic Argiudolls
Sunbury	

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
-	Fine-loamy, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Titus	Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls Fine, smectitic, mesic Vertic Endoaquolls
	Fine, illitic, mesic Oxyaquic Argiudolls Fine, illitic, mesic Mollic Oxyaquic Hapludalfs
	Fine, illitic, mesic Oxyaquic Hapludalfs Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
-	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls
*Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs
Wenona	Fine, smectitic, mesic Oxyaquic Argiudolls
*Wenona	Fine, smectitic, mesic Mollic Oxyaquic Hapludalfs

Table 5.--Acreage and Proportionate Extent of the Soils

	I I		Percent
23B	 Blount silt loam, 2 to 4 percent slopes	1,431	0.2
	Muscatune silt loam, 0 to 2 percent slopes	33,394	4.5
60C2	La Rose loam, 5 to 10 percent slopes, eroded	459	*
60D2	La Rose loam, 10 to 18 percent slopes, eroded	157	*
	Atterberry silt loam, 0 to 2 percent slopes	2,832	0.4
	Atterberry silt loam, 2 to 5 percent slopes	3,100	
67A	Harpster silty clay loam, 0 to 2 percent slopes	11,739	1.6
	Sable silty clay loam, 0 to 2 percent slopes	51,883	
86B 86C2	Osco silt loam, 5 to 10 percent slopes, eroded	10,105 2,841	
	Dickinson sandy loam, 0 to 2 percent slopes	184	
	Dickinson sandy loam, 2 to 5 percent slopes	660	1
	Dickinson sandy loam, 5 to 10 percent slopes, eroded	187	1
88B	Sparta loamy sand, 1 to 6 percent slopes	241	*
88D	Sparta loamy sand, 6 to 12 percent slopes	77	*
91A	Swygert silty clay loam, 0 to 2 percent slopes	1,772	0.2
91B	Swygert silty clay loam, 2 to 4 percent slopes	13,662	1.9
91B2	Swygert silty clay loam, 2 to 4 percent slopes, eroded	3,047	0.4
91C2	Swygert silty clay loam, 4 to 6 percent slopes, eroded	5,803	0.8
91C3	Swygert silty clay loam, 4 to 6 percent slopes, severely eroded	1,581	0.2
	Houghton muck, 0 to 2 percent slopes	352	*
	Virgil silt loam, 0 to 2 percent slopes	2,781	
105A	Batavia silt loam, 0 to 2 percent slopes	672	*
	Batavia silt loam, 2 to 5 percent slopes	3,129	1
	Batavia silt loam, 5 to 10 percent slopes, eroded	433	*
	Selma loam, 0 to 2 percent slopes	191	*
	Alvin fine sandy loam, 2 to 5 percent slopes	221 116	*
131C2 132A	Starks silt loam, 0 to 2 percent slopes	1,314	!
134A	Camden silt loam, 0 to 2 percent slopes	654	1
134B	Camden silt loam, 2 to 5 percent slopes	4,296	0.6
134C2	Camden silt loam, 5 to 10 percent slopes, eroded	3,068	1
134D2	Camden silt loam, 10 to 18 percent slopes, eroded	983	0.1
134D3	Camden silty clay loam, 10 to 18 percent slopes, severely eroded	333	*
134F	Camden silt loam, 18 to 35 percent slopes	196	*
	Elliott silt loam, 0 to 2 percent slopes	583	*
	Elliott silt loam, 2 to 4 percent slopes	7,516	1.0
	Elliott silty clay loam, 2 to 4 percent slopes, eroded	894	1
	Clarence silty clay loam, 2 to 4 percent slopes, eroded	742	0.1
148A	Proctor silt loam, 0 to 2 percent slopes	1,330	1
	Proctor silt loam, 2 to 5 percent slopes	4,614	
	Proctor silt loam, 5 to 10 percent slopes, eroded	2,547	
	Brenton silt loam, 0 to 2 percent slopes	5,397 192	
	Ridgeville fine sandy loam, 2 to 4 percent slopes	175	1
151B	Drummer silty clay loam, 0 to 2 percent slopes	55,211	:
154A	Flanagan silt loam, 0 to 2 percent slopes	12,365	1.7
171A	Catlin silt loam, 0 to 2 percent slopes	186	*
	Catlin silt loam, 2 to 5 percent slopes	10,263	1.4
171B2	Catlin silt loam, 2 to 5 percent slopes, eroded	4,008	0.5
171C2	Catlin silt loam, 5 to 10 percent slopes, eroded	14,067	1.9
171C3	Catlin silty clay loam, 5 to 10 percent slopes, severely eroded	1,118	0.2
	Mayville silt loam, 5 to 10 percent slopes, eroded	697	*
198A	Elburn silt loam, 0 to 2 percent slopes	14,737	2.0
	Plano silt loam, 0 to 2 percent slopes	1,043	
199B	Plano silt loam, 2 to 5 percent slopes	10,230	
199C2	Plano silt loam, 5 to 10 percent slopes, eroded	2,924	
206A	Thorp silt loam, 0 to 2 percent slopes	4,518	
210A	Lena muck, 0 to 2 percent slopes	411	*
219A 223B	Millbrook silt loam, 0 to 2 percent slopes Varna silt loam, 2 to 4 percent slopes	698 590	*
223B 223B2	Varna silt loam, 2 to 4 percent slopes Varna silt loam, 2 to 4 percent slopes, eroded	590 1,092	*
223B2 223C2	Varna silt loam, 4 to 6 percent slopes, eroded	7,025	1.0

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map	Soil name	Acres	 Percent
symbol			1
223C3		2,052	0.3
223D2	Varna silt loam, 6 to 12 percent slopes, eroded	693	*
223D3	Varna silty clay loam, 6 to 12 percent slopes, severely eroded	1,285	0.2
228B	Nappanee silt loam, 2 to 4 percent slopes	3,456	0.5
228C2	Nappanee silty clay loam, 4 to 6 percent slopes, eroded	3,753	0.5
228C3	Nappanee silty clay loam, 4 to 6 percent slopes, severely eroded	616	*
232A	Ashkum silty clay loam, 0 to 2 percent slopes	6,452	0.9
233A	Birkbeck silt loam, 0 to 2 percent slopes	293	*
233B	Birkbeck silt loam, 2 to 5 percent slopes	5,454	0.7
233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded	4,453	1
234A	Sunbury silt loam, 0 to 2 percent slopes	3,229	1
235A	Bryce silty clay, 0 to 2 percent slopes	14,212	1
236A	Sabina silt loam, 0 to 2 percent slopes	4,255	0.6
238A 241C3	Rantoul silty clay, 0 to 2 percent slopes Chatsworth silty clay, 4 to 6 percent slopes, severely eroded	227 90	
241C3 241D3	Chatsworth silty clay, 4 to 6 percent slopes, severely eroded	1,840	0.3
241E3	Chatsworth silty clay, 12 to 20 percent slopes, severely eroded	1,681	1
241E3	Chatsworth silty clay loam, 20 to 30 percent slopes	3,505	1
241G	Chatsworth silty clay loam, 30 to 50 percent slopes	4,245	1
242A	Kendall silt loam, 0 to 2 percent slopes	1,464	1
243A	St. Charles silt loam, 0 to 2 percent slopes	860	0.1
243B	St. Charles silt loam, 2 to 5 percent slopes	4,045	1
243C2	St. Charles silt loam, 5 to 10 percent slopes, eroded	1,835	1
244A	Hartsburg silty clay loam, 0 to 2 percent slopes	3,691	1
278A	Stronghurst silt loam, 0 to 2 percent slopes	1,453	1
278B	Stronghurst silt loam, 2 to 5 percent slopes	1,039	1
279B	Rozetta silt loam, 2 to 5 percent slopes	1,676	0.2
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	689	*
290A	Warsaw silt loam, 0 to 2 percent slopes	233	*
290B	Warsaw silt loam, 2 to 4 percent slopes	437	*
290C2	Warsaw silt loam, 4 to 6 percent slopes, eroded	340	*
293A	Andres silt loam, 0 to 2 percent slopes	625	*
293B	Andres silt loam, 2 to 5 percent slopes	1,738	0.2
294B	Symerton silt loam, 2 to 5 percent slopes	920	0.1
294C2	Symerton silt loam, 5 to 10 percent slopes, eroded	1,472	0.2
295A	Mokena silt loam, 0 to 2 percent slopes	1,145	0.2
295B	Mokena silt loam, 2 to 4 percent slopes	2,678	:
298B	Beecher silt loam, 2 to 4 percent slopes	795	0.1
311B	Ritchey silt loam, 2 to 4 percent slopes	67	*
314A	Joliet silt loam, 0 to 2 percent slopes	179	*
315B	Channahon silt loam, 2 to 4 percent slopes	489	*
317A	Millsdale silty clay loam, 0 to 2 percent slopes Lorenzo loam, 2 to 4 percent slopes	634	* *
318B 318C2	Lorenzo loam, 2 to 4 percent slopes Lorenzo loam, 4 to 6 percent slopes, eroded	250 341	*
320B	Frankfort silt loam, 2 to 4 percent slopes	1,301	0.2
320E	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	961	0.1
325B	Dresden silt loam, 2 to 4 percent slopes	254	*
325C2	Dresden silt loam, 4 to 6 percent slopes, eroded	270	*
327B	Fox silt loam, 2 to 4 percent slopes	561	*
327C2	Fox silt loam, 4 to 6 percent slopes, eroded	729	*
327D2	Fox loam, 6 to 12 percent slopes, eroded	592	*
330A	Peotone silty clay loam, 0 to 2 percent slopes	2,992	0.4
344A	Harvard silt loam, 0 to 2 percent slopes	270	*
344B	Harvard silt loam, 2 to 5 percent slopes	1,104	0.2
344C2	Harvard silt loam, 5 to 10 percent slopes, eroded	498	*
356A	Elpaso silty clay loam, 0 to 2 percent slopes	25,294	3.4
375A	Rutland silty clay loam, 0 to 2 percent slopes	6,561	0.9
375B	Rutland silty clay loam, 2 to 5 percent slopes	30,906	4.2
375B2	Rutland silty clay loam, 2 to 5 percent slopes, eroded	857	0.1
388B	Wenona silt loam, 2 to 5 percent slopes	1,802	0.2
388B2	Wenona silt loam, 2 to 5 percent slopes, eroded	298	*
	Wenona silty clay loam, 5 to 10 percent slopes, eroded		

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	 Soil name 	Acres	 Percent
397F	 Boone loamy fine sand, 15 to 35 percent slopes	519	*
413B	Gale silt loam, 2 to 4 percent slopes	404	*
413C2	Gale silt loam, 4 to 6 percent slopes, eroded	234	*
435A	Streator silty clay loam, 0 to 2 percent slopes	20,585	2.8
448B	Mona silt loam, 2 to 5 percent slopes	788	0.1
448C2	Mona silt loam, 5 to 10 percent slopes, eroded	845	0.1
512B	Danabrook silt loam, 2 to 5 percent slopes	92	*
512C2	Danabrook silt loam, 5 to 10 percent slopes, eroded	230	*
516A	Faxon loam, 0 to 2 percent slopes	2,370	0.3
527C2	Kidami loam, 4 to 6 percent slopes, eroded	296	*
527D2	Kidami loam, 6 to 12 percent slopes, eroded	738	0.1
530B	Ozaukee silt loam, 2 to 4 percent slopes	371	*
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	1,927	0.3
530C3	Ozaukee silty clay loam, 4 to 6 percent slopes, severely eroded	294	*
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	801	0.1
530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	348	*
530E2	Ozaukee silt loam, 12 to 20 percent slopes, eroded	356	*
530F	Ozaukee silt loam, 20 to 30 percent slopes	40	*
541B	Graymont silt loam, 2 to 5 percent slopes	965	0.1
541B2	Graymont silt loam, 2 to 5 percent slopes, eroded	182	*
541C2	Graymont silt loam, 5 to 10 percent slopes, eroded	2,605	0.4
542A	Rooks silty clay loam, 0 to 2 percent slopes	1,932	0.3
542B	Rooks silty clay loam, 2 to 5 percent slopes	1,639	0.2
549B	Marseilles silt loam, 2 to 5 percent slopes	914	0.1
549C2	Marseilles silt loam, 5 to 10 percent slopes, eroded	857	0.1
549D2 549F	Marseilles silt loam, 10 to 18 percent slopes, eroded	527 1,131	0.2
549F 549G	Marseilles silt loam, 35 to 60 percent slopes	799	0.2
549G 554B	Kernan silt loam, 2 to 4 percent slopes	2,051	0.1
560D2	St. Clair silty clay loam, 6 to 12 percent slopes, eroded	1,555	0.3
560E	St. Clair silty clay loam, 12 to 20 percent slopes	595	*
567B	Elkhart silt loam, 2 to 5 percent slopes	27	*
572A	Loran silt loam, 0 to 2 percent slopes	886	0.1
572B	Loran silt loam, 2 to 5 percent slopes	454	*
572C2	Loran silt loam, 5 to 10 percent slopes, eroded	236	*
614A	Chenoa silty clay loam, 0 to 2 percent slopes	745	0.1
614B	Chenoa silty clay loam, 2 to 5 percent slopes	5,755	0.8
662B	Barony silt loam, 2 to 5 percent slopes	594	*
663B	Clare silt loam, 2 to 5 percent slopes	2,756	0.4
667B	Kaneville silt loam, 2 to 5 percent slopes	422	*
668B	Somonauk silt loam, 2 to 5 percent slopes	325	*
675B	Greenbush silt loam, 2 to 5 percent slopes	661	*
675C2	Greenbush silt loam, 5 to 10 percent slopes, eroded	400	*
679B	Blackberry silt loam, 2 to 5 percent slopes	12,739	1.7
680B	Campton silt loam, 2 to 5 percent slopes	1,015	0.1
712A	Spaulding silty clay loam, 0 to 2 percent slopes	4,613	0.6
715A	Arrowsmith silt loam, 0 to 2 percent slopes	1,687	0.2
732A	Appleriver silt loam, 0 to 2 percent slopes	538	*
732B	Appleriver silt loam, 2 to 5 percent slopes	451	*
791A	Rush silt loam, 0 to 2 percent slopes	52	*
791B	Rush silt loam, 2 to 4 percent slopes	371	*
792A	Bowes silt loam, 0 to 2 percent slopes	223	*
792B	Bowes silt loam, 2 to 4 percent slopes	450	*
794G	Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes Orthents, loamy, undulating	4,348	0.6
802B	Orthents, loamy, undulating	4,346	1
802D 804D	Orthents, loamy, rolling	1,021	1
804D 804G	Orthents, acid, steep	1,216 336	0.2
804G 805B	Orthents, clayey, undulating	866	0.1
814A	Muscatune-Buckhart silt loams, 0 to 3 percent slopes	56,881	7.7
817A	Channahon-Hesch fine sandy loams, 0 to 2 percent slopes	1,337	0.2
817B	Channahon-Hesch fine sandy loams, 2 to 6 percent slopes	1,623	0.2
3 		1,023	

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map	Soil name	Acres	Percent
symbol			
			I
818A	Flanagan-Catlin silt loams, 0 to 3 percent slopes	35,058	4.8
820E	Hennepin-Casco complex, 12 to 30 percent slopes	3,707	0.5
820G	Hennepin-Casco complex, 30 to 60 percent slopes	3,599	0.5
830	Landfills	270	*
864	Pits, quarry	4,016	0.5
865	Pits, gravel	2,298	0.3
969E2	Casco-Rodman complex, 12 to 20 percent slopes, eroded	452	*
969F	Casco-Rodman complex, 20 to 30 percent slopes	537	*
1103A	Houghton muck, undrained, 0 to 2 percent slopes	80	*
1480A	Moundprairie silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded	1,541	0.2
3073A	Ross loam, 0 to 2 percent slopes, frequently flooded	4,026	0.5
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded	291	*
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded	2,751	0.4
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	2,969	0.4
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded	1,676	0.2
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	2,945	0.4
3480A	Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded	1,641	0.2
3800A	Psamments, nearly level, frequently flooded	306	*
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded	658	*
8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded	1,044	0.1
8107A	Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded	1,243	0.2
8151A	Ridgeville fine sandy loam, 0 to 2 percent slopes, occasionally flooded	155	*
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	575	*
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	598	*
8516A	Faxon loam, 0 to 2 percent slopes, occasionally flooded	860	0.1
MW	Miscellaneous water	135	*
W	Water	10,525	1.4
	 Total	735,640	100.0

^{*} Less than 0.1 percent.

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland

(See text for a description of the limitations and hazards listed in this table. Only the soils that are generally available for use as cropland or pastureland are listed. Absence of an entry indicates that the soil is generally not suited to use as cropland or pastureland)

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
3B: Blount	 - Wetness, root-restrictive layer, high pH, crusting, water erosion, restricted permeability	 Wetness, root-restrictive layer, low pH, high pH
IA: Muscatune	 - Wetness	Wetness
OC2: La Rose	 - High pH, crusting, water erosion, restricted permeability	 High pH, water erosion
0D2: La Rose	 - High pH, crusting, water erosion, restricted permeability	 High pH, water erosion
1A: Atterberry	 - Wetness, crusting	 Wetness, low pH
1B: Atterberry	 - Wetness, crusting, water erosion	 Wetness, low pH, water erosion
7A: Harpster	 - Ponding, poor tilth, excess lime	 Ponding, excess lime, frost heave, poor tilth
8A: Sable	 - Ponding, poor tilth	Ponding, frost heave, poor tilth
6B: Osco	 - Water erosion	Low pH, water erosion
6C2:	- Crusting, water erosion	Low pH, water erosion
7A: Dickinson	 - Limited available water capacity, excessive permeability	Low pH, limited available water capacity, excessive permeability
7B: Dickinson	 - Limited available water capacity, excessive permeability	Low pH, limited available water capacity, excessive permeability
7C2: Dickinson	 - Water erosion, limited available water capacity, excessive permeability	Low pH, water erosion, limite available water capacity, excessive permeability

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
88B: Sparta	 - Wind erosion, limited available water capacity, excessive permeability	Low pH, wind erosion, limited available water capacity, excessive permeability
88D: Sparta	 	 Low pH, wind erosion, limited available water capacity, excessive permeability
91A: Swygert	 Wetness, root-restrictive layer, poor tilth, high pH, restricted permeability	 Wetness, root-restrictive layer, high pH, poor tilth
91B: Swygert	Wetness, root-restrictive layer, poor tilth, high pH, restricted permeability, water erosion	 Wetness, root-restrictive layer, high pH, poor tilth
91B2: Swygert	Wetness, root-restrictive layer, poor tilth, high pH, restricted permeability water erosion	 Wetness, root-restrictive layer, poor tilth, high pH
91C2: Swygert	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion, restricted permeability	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion
91C3: Swygert	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion, restricted permeability	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion
103A: Houghton	 Ponding, wind erosion, subsidence, crusting	 Ponding, low pH, wind erosion, frost heave
104A: Virgil	 	 Wetness, low pH
105A: Batavia	 Crusting 	Low pH
105B: Batavia	 - Crusting, water erosion	 Low pH, water erosion
105C2: Batavia	 Crusting, water erosion	 Low pH, water erosion
125A: Selma	 Ponding	 Ponding, frost heave
131B: Alvin	 	 - Low pH, low fertility -

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
31C2: Alvin	 Water erosion 	 Low pH, water erosion, low fertility
32A: Starks	 Wetness, crusting	 Wetness, low pH
34A: Camden	 - Crusting	Low pH
34B: Camden	 - Crusting, water erosion 	
34C2: Camden	 - Crusting, water erosion 	 - Low pH, water erosion
34D2: Camden	 	 Low pH, water erosion
34D3: Camden		Poor tilth, low pH, water erosion, low fertility, excessive permeability
34F: Zamden	 	 Equipment limitation, low pH, water erosion, excessive permeability
16A: 31liott	 Wetness, root-restrictive layer, restricted permeability	 Wetness, root-restrictive layer
16B: ?lliott	 Wetness, root-restrictive layer, high pH, restricted permeability, water erosion	 Wetness, root-restrictive layer, high pH
46B2: Blliott	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion, restricted permeability	 Wetness, root-restrictive layer, poor tilth, high pH
47B2: Clarence	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion, limited available water capacity, restricted permeability	 Wetness, root-restrictive layer, poor tilth, high pH, limited available water capacity
48A: Proctor	 No major limitations	Low pH
88: Proctor	 Water erosion	Low pH
18C2: Proctor	 Water erosion	 Low pH, water erosion

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
149A: Brenton	 Wetness	
151A: Ridgeville	 Wetness	 Wetness
151B: Ridgeville	 Wetness	 Wetness
152A: Drummer	 Ponding, poor tilth 	 Ponding, frost heave, poor tilth
154A: Flanagan	 Wetness, restricted permeability	 Wetness
171A: Catlin	 No major limitations	Low pH
171B: Catlin	 	
171B2: Catlin	 	
171C2: Catlin	 	
171C3: Catlin	 Poor tilth, crusting, water erosion	 Poor tilth, water erosion
193C2: Mayville	 High pH, crusting, water erosion,	 Low pH, high pH, water erosion
198A: Elburn	 Wetness	 Wetness
199A: Plano	 No major limitations	Low pH
199B: Plano	 Water erosion	Low pH, water erosion
199C2: Plano	 Water erosion	Low pH, water erosion
206A: Thorp	 Ponding, restricted permeability	 Ponding, low pH, frost heave
210A: Lena	 Ponding, excess lime, wind erosion, subsidence	 Ponding, wind erosion, excess lime, frost heave
219A: Millbrook	 Wetness	 Wetness, low pH

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
223B: Varna	 - Root-restrictive layer, high pH, restricted permeability, water erosion	
223B2: Varna	 Root-restrictive layer, high pH, crusting, water erosion, restricted permeability	:
223C2: Varna	 Root-restrictive layer, high pH, crusting, water erosion, restricted permeability	:
23C3: Varna	 Root-restrictive layer, poor tilth, high pH, crusting, water erosion, restricted, permeability	 Root-restrictive layer, poor tilth, high pH, water erosion
23D2: Varna	 Root-restrictive layer, high pH, crusting, water erosion, restricted permeability	:
23D3: Varna	 Root-restrictive layer, poor tilth, high pH, crusting, water erosion, restricted permeability	 Root-restrictive layer, poor tilth, water erosion, high pH
28B: Nappanee	 Wetness, root-restrictive layer, high pH, crusting, water erosion, restricted permeability	 Wetness, root-restrictive layer, low pH, high pH, water erosion
28C2: Nappanee		 Wetness, root-restrictive layer, poor tilth, low pH, high pH, water erosion, limited available water capacity
28C3: Nappanee	layer, poor tilth, high pH,	 Wetness, root-restrictive layer, poor tilth, low pH, high pH, water erosion, limited available water capacity, low fertility
32A: Ashkum	 Ponding, poor tilth	 Ponding, frost heave, poor tilth
233A: Birkbeck	 - No major limitations	 - Low pH

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
233B: Birkbeck	 - Crusting, water erosion	Low pH, water erosion
233C2: Birkbeck	 - Crusting, water erosion 	 - Low pH, water erosion
234A: Sunbury	 Wetness 	 Wetness
235A: Bryce	:	 Ponding, frost heave, poor tilth
236A: Sabina	 - Wetness, crusting 	 Wetness, low pH
238A: Rantoul		 Ponding, frost heave, poor tilth
241C3: Chatsworth	 	Root-restrictive layer, poor tilth, water erosion, limited available water capacity, low fertility, excess lime
241D3: Chatsworth	 	Root-restrictive layer, poor tilth, water erosion, limited available water capacity, low fertility, excess lime
241E3: Chatsworth		
241F: Chatsworth		
241G: Chatsworth		
242A: Kendall	 - Wetness, crusting	 - Wetness, low pH
243A: St. Charles	 - Crusting	Low pH
243B: St. Charles	 - Crusting, water erosion	Low pH, water erosion
243C2: St. Charles	 - Crusting, water erosion	Low pH, water erosion
244A: Hartsburg	 Ponding, high pH, poor tilth 	 Ponding, high pH, poor tilth, frost heave
278A: Stronghurst	 Wetness, crusting 	 Wetness, low pH

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
78B: Stronghurst	 Wetness, crusting, water erosion	 Wetness, low pH, water erosion
79B: Rozetta	 Crusting, water erosion	Low pH, water erosion
80C2: Fayette	 Crusting, water erosion	 - Low pH, water erosion
90A: Warsaw	 High pH, excessive permeability	 Low pH, high pH, excessive permeability
90B: Warsaw	 High pH, water erosion, excessive permeability	 Low pH, high pH, excessive permeability
90C2: Warsaw	High pH, crusting, water erosion, limited available water capacity, excessive permeability	Low pH, high pH, water erosion, limited available water capacity, excessive permeability
93A: Andres	 Wetness	 Wetness
93B: Andres	 Wetness, water erosion	
94B: Symerton	 High pH, water erosion	
94C2: Symerton	 High pH, crusting, water erosion	 High pH, water erosion
95A: Mokena	 Wetness, root-restrictive layer, restricted permeability	 Wetness, root-restrictive layer
95B: fokena	 Wetness, root-restrictive layer, restricted permeability	 Wetness, root-restrictive layer
98B: Beecher	Wetness, root-restrictive layer, high pH, water erosion, restricted permeability	 Wetness, root-restrictive layer, low pH, high pH, excess lime
llB: Ritchey	 Depth to bedrock, crusting, water erosion, limited available water capacity	 Depth to bedrock, limited available water capacity, water erosion
.4A: Joliet	 Ponding, depth to bedrock, excess lime, limited available water capacity	 Ponding, depth to bedrock, limited available water capacity, excess lime, frost heave

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
315B: Channahon	 Depth to bedrock, water erosion, limited available water capacity	 Depth to bedrock, limited available water capacity, water erosion
317A: Millsdale		 Ponding, depth to bedrock, poor tilth, frost heave
318B: Lorenzo	High pH, water erosion, limited available water capacity, excessive permeability	 High pH, limited available water capacity, excessive permeability
318C2: Lorenzo	High pH, crusting, water erosion, limited available water capacity, excessive permeability	High pH, water erosion, limited available water capacity, excessive permeability
320B: Frankfort	Wetness, root-restrictive layer, high pH, water erosion, limited available water capacity, restricted permeability	 Wetness, root-restrictive layer, high pH, limited available water capacity, water erosion
320C2: Frankfort	Wetness, root-restrictive layer, poor tilth, high pH, crusting, water erosion, limited available water capacity, restricted permeability	 Wetness, root-restrictive layer, poor tilth, high pH, water erosion, limited available water capacity
325B: Dresden	 High pH, water erosion, excessive permeability	 High pH, water erosion, excessive permeability
325C2: Dresden	 High pH, crusting, water erosion, excessive permeability	High pH, water erosion, excessive permeability
327B: Fox	High pH, crusting, water erosion, excessive permeability	Low pH, high pH, excessive permeability, water erosion
327C2: Fox	High pH, crusting, water erosion, limited available water capacity, excessive permeability	Low pH, high pH, water erosion, limited available water capacity, excessive permeability
327D2: Fox	High pH, crusting, water erosion, excessive permeability, limited available water capacity	Low pH, high pH, water erosion, excessive permeability, limited available water capacity

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
330A: Peotone	 Ponding, poor tilth 	 Ponding, frost heave, poor tilth
344A: Harvard	 No major limitations	Low pH
344B: Harvard	 Water erosion 	 - Low pH, water erosion
344C2: Harvard	 - Crusting, water erosion 	 - Low pH, water erosion
856A: Elpaso	 Ponding, poor tilth	 Ponding, frost heave, poor tilth
375A: Rutland	 Wetness, poor tilth	 Wetness, poor tilth, low pH
375B: Rutland	 Wetness, poor tilth, water erosion	 Wetness, poor tilth, water erosion, low pH
375B2: Rutland	 Wetness, poor tilth, water erosion	 Wetness, poor tilth, water erosion, low pH
388B: Wenona	 Water erosion	 - Water erosion, low pH
888B2: Wenona	 - Water erosion -	 - Water erosion, low pH -
888C2: Wenona	 Water erosion, poor tilth	 Water erosion, low pH, poor tilth
397F: Boone		
413B: Gale	 Depth to bedrock, crusting, water erosion, excessive permeability	Depth to bedrock, low pH, water erosion, excessive permeability
413C2: Gale	 Depth to bedrock, crusting, water erosion, excessive permeability	Depth to bedrock, low pH, water erosion, excessive permeability
135A: Streator		 Ponding, frost heave, poor tilth
48B: Mona	 - Root-restrictive layer, high pH, water erosion, restricted permeability	

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	 Limitations and hazards affecting cropland 	Limitations and hazards affecting pastureland
448C2: Mona	 Root-restrictive layer, high pH, water erosion, restricted permeability	 Root-restrictive layer, high pH, water erosion
512B: Danabrook	 Water erosion 	 - Low pH, water erosion
512C2: Danabrook	 Water erosion	Low pH, water erosion
516A: Faxon	 Ponding, depth to bedrock	 Ponding, depth to bedrock, low pH, frost heave
527C2: Kidami	 - Crusting, water erosion 	 Low pH, water erosion
527D2: Kidami	 High pH, crusting, water erosion	 Low pH, high pH, water erosion
330B: Ozaukee	 Root-restrictive layer, high pH, water erosion, crusting, restricted permeability	:
330C2: Ozaukee	 Root-restrictive layer, high pH, water erosion, crusting, restricted permeability	:
330C3: Ozaukee	 Root-restrictive layer, poor tilth, high pH, crusting, water erosion, restricted permeability	 Root-restrictive layer, poor tilth, high pH, water erosion, low fertility
330D2: Ozaukee	 Root-restrictive layer, high pH, water erosion, crusting, restricted permeability	1
530D3: Ozaukee	Root-restrictive layer, poor tilth, high pH, crusting, water erosion, restricted permeability	 Root-restrictive layer, poor tilth, high pH, water erosion, low fertility
530E2: Ozaukee	 Root-restrictive layer, high pH, water erosion, crusting, restricted permeability	:
330F: Ozaukee	 	 Equipment limitation, root- restrictive layer, high pH, water erosion
641B: Graymont	 High pH, water erosion, restricted permeability	 High pH, water erosion

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
541B2: Graymont	 High pH, water erosion, restricted permeability	 High pH, water erosion
541C2: Graymont	 High pH, water erosion, restricted permeability	 High pH, water erosion
42A: Rooks	 Wetness, poor tilth, high pH 	 Wetness, high pH, poor tilth
42B: Rooks	 Wetness, poor tilth, high pH, water erosion	 Wetness, high pH, poor tilth, water erosion
49B: Marseilles	 Depth to bedrock, crusting, water erosion, restricted permeability	 Depth to bedrock, low pH, water erosion
349C2: Marseilles	 Depth to bedrock, crusting, water erosion, limited available water capacity, restricted permeability	 Depth to bedrock, low pH, water erosion, limited available water capacity
649D2: Marseilles	 Depth to bedrock, crusting, water erosion, limited available water capacity, restricted permeability	 Depth to bedrock, low pH, water erosion, limited available water capacity
49F: Marseilles		
49G: Marseilles		
54B: Kernan	 Wetness, crusting, water erosion, restricted permeability	 Wetness, water erosion, low pH
560D2: St. Clair	Root-restrictive layer, poor tilth, high pH, crusting, water erosion, limited available water capacity, restricted permeability	 Root-restrictive layer, poor tilth, low pH, high pH, water erosion, limited available water capacity
660E: St. Clair	 	 Equipment limitation, root- restrictive layer, poor tilth, low pH, high pH, wate: erosion, limited available water capacity
67B: Elkhart	 High pH, water erosion	 High pH, water erosion
72A: Loran	 Wetness	 Wetness

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
572B: Loran	 Wetness, water erosion	 Wetness, water erosion
572C2: Loran	 	
514A: Chenoa	 Wetness, poor tilth, high pH, restricted permeability	 Wetness, high pH, poor tilth
14B: Chenoa	 Wetness, poor tilth, water erosion	 Wetness, poor tilth, water erosion
662B: Barony	 - Water erosion -	 - Low pH, water erosion
63B: Clare	 - Water erosion -	 - Low pH, water erosion
667B: Kaneville	 - Water erosion -	 Water erosion
668B: Somonauk	 - Crusting, water erosion	
75B: Greenbush	 - Crusting, water erosion	Low pH, water erosion
75C2: Greenbush	 	Low pH, water erosion
79B: Blackberry	 - Water erosion	Low pH, water erosion
80B: Campton	 	Low pH, water erosion
712A: Spaulding	 - Ponding, excess lime, poor tilth	 Ponding, poor tilth, excess lime, frost heave
715A: Arrowsmith	 Wetness, high pH 	 Wetness, high pH
	 Wetness, crusting, restricted permeability	 Wetness, low pH
732B: Appleriver	 Wetness, water erosion, crusting, restricted permeability	 Wetness, water erosion, low pH
791A: Rush	 Crusting, excessive permeability	 Low pH, excessive permeability
791B: Rush	Crusting, water erosion, excessive permeability	Low pH, water erosion, excessive permeability

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
92A: Bowes	 Excessive permeability 	Low pH, excessive permeability
92B: Bowes	 Water erosion, excessive permeability	Low pH, water erosion, excessive permeability
94G: Marseilles		
Northfield		
Ritchey	 	
02B: Orthents, loamy	 - Crusting, water erosion	 Water erosion
02D: Orthents, loamy	 - Crusting, water erosion	 Water erosion
04D: Orthents, acid		
04G: Orthents, acid		
05B: Orthents, clayey	 Poor tilth, water erosion, limited available water capacity, restricted permeability	 Poor tilth, water erosion, limited available water capacity
14A: Muscatune	 Wetness	 Wetness
Buckhart	 No major limitations	 No major limitations
17A: Channahon	 Depth to bedrock, limited available water capacity 	 Depth to bedrock, low pH, limited available water capacity
Hesch	 Depth to bedrock, limited available water capacity 	
17B: Channahon	 Depth to bedrock, water erosion, limited available water capacity	 Depth to bedrock, low pH, limited available water capacity, water erosion
Hesch	 Depth to bedrock, water erosion, limited available water capacity	Depth to bedrock, low pH, limited available water capacity, water erosion
18A: Flanagan	 Wetness	 Wetness
	 No major limitations	Low pH

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
820E: Hennepin	 	 Equipment limitation, water erosion, excess lime
Casco	 	 Equipment limitation, high pH, water erosion
820G: Hennepin	 	
Casco		
969E2: Casco	 	 Equipment limitation, high pH, water erosion, limited available water capacity,
Rodman	 	excessive permeability
969F: Casco		
Rodman		
1103A: Houghton	 	 Ponding, low pH, wind erosion, frost heave
1480A: Moundprairie	 	 - Flooding, ponding, poor tilth, high pH, frost heave
3073A: Ross	 Flooding	 - Flooding
3076A: Otter	 Flooding, ponding 	 Flooding, ponding, frost heave
3082A: Millington	 Flooding, ponding, excess lime	 Flooding, ponding, excess lime, frost heave
3107A: Sawmill	 - Flooding, ponding, poor tilth	 Flooding, ponding, frost heave, poor tilth
3321A: Du Page	 Flooding, excess lime 	 Flooding, excess lime
3451A: Lawson	 Flooding, wetness	 Flooding, wetness
3480A: Moundprairie	 Flooding, ponding, poor tilth, high pH 	 Flooding, ponding, poor tilth, high pH, frost heave

Table 6.--Limitations and Hazards Affecting Cropland and Pastureland--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pastureland
3800A:		
Psamments	Flooding, wind erosion, limited available water capacity, excessive permeability	Flooding, low pH, wind erosion, limited available water capacity, low fertility, excessive permeability
7073A:		
Ross	No major limitations	No major limitations
8073A:	 	
Ross	 Flooding	 Flooding
	İ	İ
8107A: Sawmill	 Flooding, ponding, poor tilth 	 Flooding, ponding, frost heave, poor tilth
8151A:		
Ridgeville	 Flooding, wetness	 Flooding, wetness
]	
8404A:		
Titus	Flooding, ponding, poor tilth, restricted permeability	Flooding, ponding, poor tilth, frost heave
8451A:		
Lawson	Flooding, wetness	Flooding, wetness
8516A:	 	
Faxon	Flooding, ponding, depth to	Flooding, ponding, depth to
	bedrock	bedrock, low pH, frost heave

Table 7.--Land Capability and Yields per Acre of Crops and Pasture

(Yields for corn, soybeans, winter wheat, oats, and grass-legume hay are those that can be expected under an optimum level of management. Yields for grass-legume pasture are those that can be expected under an average level of management. All yields are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat 	Oats	Grass-legume hay	 Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
23B: Blount	2e	124	 43		58	 4.00	 5.80
51A: Muscatune	1	180	 57	 68	94	 5.42	 8.00
60C2: La Rose	3e	133	 44	53	62	4.20	 6.10
60D2: La Rose	4e	124	 	50	58	3.90	 5.70
61A: Atterberry	1	164	 51	64	88	 4.97	 7.30
61B: Atterberry	2e	162	 50	63	87	4.92	 7.30
67A: Harpster	2w	164	 52	61	80	4.86	 7.20
68A: Sable	2w	171	 56		88	 5.15	 7.50
86B: Osco	2e	170	 53	67	91	 6.16	 9.0
86C2: Osco	3e	160	 50	63	86	5.78	 8.30
87A: Dickinson	2s	128	 42		67	3.05	 4.50
87B: Dickinson	2e	127	 42		66	3.02	 4.40
87C2: Dickinson	3e	119	 39		62	2.84	 4.10
88B: Sparta	4s	106	 37		51	3.58	 5.20
88D: Sparta	6s	103	 36		50	3.30	 4.80
91A: Swygert	2w	143	 4 7		71	4.10	 6.0
91B: Swygert	2e	142	 47	 56	70	 4.10	 5.90

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans 	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
91B2: Swygert	 	133	 44	53	66	3.80	 5.50
91C2: Swygert	 	132	 43	52	65	3.80	 5.40
91C3: Swygert	 	86	 29		55	3.03	 4.47
103A: Houghton	 	158	 52			 	 7.00
104A: Virgil		164	 50		87	 5.00	 7.30
105A: Batavia		159	 50		85	 5.20	 7.70
105B: Batavia		157	 50	60	84	 5.20	 7.60
105C2: Batavia	 3e	148	 47		79	 4.84	 7.10
125A: Selma	 	157	 51	62	80	4.80	 7.00
131B: Alvin	 	134	 44	52	66	3.40	 4.90
131C2: Alvin	 	126	 41	49	62	3.15	 4.60
132A: Starks	 	147	 46	 	76	4.60	 6.80
134A: Camden	 	149	 46		78	4.29	 6.30
134B: Camden	 	148	 46	 57	77	4.25	 6.30
134C2: Camden	 	139	 43	 	73	3.99	 5.80
134D2: Camden	 	129	 40		67	3.71	 5.30
134D3: Camden	 6e		 			3.60	 5.20
134F: Camden	 6e		 			3.05	 4.47
146A: Elliott	 2w	151	 50	61	78	4.50	 6.70
146B: Elliott		149	 50		77	 4.50	 6.60

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat 	Oats	Grass-legume hay	Grass-legume pasture
	 	Bu	Bu	Bu	Bu	Tons	AUM*
146B2: Elliott	 	143	 48	58	74	4.30	 6.30
147B2: Clarence	 	117	 41	49	55	3.68	 5.30
148A: Proctor		164	 51	62	88	 5.70	 8.30
148B: Proctor	 	164	 51	62	88	 5.70	 8.30
148C2: Proctor	 	154	 48	 59	83	5.36	 7.70
149A: Brenton		176	 54	67	95	 5.10	 7.50
151A: Ridgeville	 	136	 46	57	70	 4.50	 6.70
151B: Ridgeville		135	 46	56	69	4.50	 6.60
152A: Drummer		173	 56	65	89	 5.04	 7.40
154A: Flanagan	 	175	 56	69	92	5.31	 7.83
171A: Catlin	1 1	168	 53	66	89	6.10	 9.00
171B: Catlin		166	 52	65	88	6.04	 8.91
171B2: Catlin		160	 50	63	85	5.80	 8.60
171C2: Catlin	 	156	 49	61	83	 5.67	 8.30
171C3: Catlin		146	 46	57	77	5.30	 7.70
193C2: Mayville	 	125	 41	50	64	3.30	 4.90
198A: Elburn		178	 55	 67	85	5.20	 7.67
199A: Plano		175	 54	67	93	6.33	 9.30
199B: Plano	 	173	 53	66	92	6.27	 9.10
199C2: Plano	 	163	 50	 62	87	 5.89	 8.60

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
206A: Thorp		153	 50	60	79	4.60	 6.80
210A: Lena	 3w	154	 49				 6.30
219A: Millbrook		159	 50	62	84	 4.80	 7.00
223B: Varna		141	 45	57	70	4.40	 6.40
223B2: Varna	 	135	 43		67	4.20	 6.20
223C2: Varna	 3e	133	 42		67	4.10	 6.10
223C3: Varna	 	124	 39	50	62	3.80	 5.50
223D2: Varna	 	131	 41	53	65	4.00	 5.90
223D3: Varna		119	 38	49	60	3.70	 5.50
228B: Nappanee	 	103	 37	41	44	3.60	 5.20
228C2: Nappanee		96	 34	38	40	3.30	 4.80
228C3: Nappanee		79	 28	30	42	2.70	 3.90
232A: Ashkum		154	 51	59	77	4.60	 6.80
233A: Birkbeck		151	 47	60	79	4.60	 6.80
233B: Birkbeck		149	 47	59	78	 4.58	 6.76
233C2: Birkbeck		140	 44	56	73	4.30	 6.30
234A: Sunbury		162	 51	63	84	 4.97	 7.33
235A: Bryce		146	 49	58	73	4.30	 6.30
236A: Sabina	 	151	 47	59	78	4.63	 6.83
238A: Rantoul	 	130	 45		58	 3.73	 5.50

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	 Land capability 	Corn	 Soybeans 	 Winter wheat 	Oats	 Grass-legume hay 	 Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
241C3: Chatsworth	 		 			2.20	 3.20
241D3: Chatsworth	 7e		 	 		 	 3.00
241E3, 241F, 241G: Chatsworth	 		 	 		 	
242A: Kendall	 2w	155	 48	 60	80	 4.75	 7.00
243A: St. Charles		151	 47	 59	78	4.63	 6.80
243B: St. Charles	 2e 	149	 47	 58	77	 4.58	 6.80
243C2: St. Charles	 3e 	140	 44 	 55 	73	4.31	 6.30
244A: Hartsburg	 2w 	164	53	 61	80	 4.86	7.20
278A: Stronghurst	 2w 	154	 48 	 60 	78	 4.80 	 7.00
278B: Stronghurst	 2e 	152	 48 	 59 	77	 4.70 	 6.90
279B: Rozetta	 2e 	147	 46 	 58 	75	 4.70 	 6.90
280C2: Fayette	 3e 	140	 44 	 56 	72	 4.42 	 6.40
290A: Warsaw	 2s 	145	 46 	 58 	73	 4.60 	 6.80
290B: Warsaw	 2e 	144	 46 	 57 	72	 4.60 	 6.80
290C2: Warsaw	 2e 	136	 43 	 55 	69	 4.30 	 6.40
293A: Andres	 1 	166	 53 	 64 	87	 4.90 	 7.20
293B: Andres	 2e 	164	 52 	63	86	4.80	 7.00
294B: Symerton	 2e 	159	 50 	 61 	81	 5.50 	 8.30
294C2: Symerton	 3e 	150	 47 	 58	76	 5.20 	 7.70

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
295A: Mokena		155	 49	60	79	4.40	 6.50
295B: Mokena		153	 49	 59	78	4.40	 6.40
298B: Beecher		136	 46		70	4.20	 6.10
311B: Ritchey		99	 34		51	3.10	 4.60
314A: Joliet	 3w	117	 40	47	61	3.30	 5.50
315B: Channahon	 	102	 35	44	54	3.30	 4.70
317A: Millsdale	 3w	129	 45	54	68	4.00	 5.80
318B: Lorenzo	 3s	128	 42	51	62	3.00	 4.40
318C2: Lorenzo		119	 39	48	58	2.80	 4.10
320B: Frankfort		119	 41	51	54	3.60	 5.20
320C2: Frankfort		110	 38	48	51	3.30	 4.80
325B: Dresden		141	 46		72	3.70	 5.40
325C2: Dresden		133	 43	52	69	3.50	 5.20
327B: Fox		133	 43	52	65	3.20	 4.60
327C2: Fox		126	 40	50	62	3.00	 4.40
327D2: Fox	 	123	 40		61	2.90	4.20
330A: Peotone		148	 49	55	70	4.50	 6.70
344A: Harvard		154	 48	60	79	5.00	 7.30
344B: Harvard		152	 48	59	78	5.00	 7.30
344C2: Harvard	 	143	 45		73	 4.70	 6.70

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	 Soybeans 	Winter wheat	Oats	Grass-legume hay	 Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
356A: Elpaso		176	 57	60	92	5.20	 7.70
375A: Rutland		162	 52	64	87	4.97	 7.30
375B: Rutland		160	 51	63	86	4.92	 7.20
375B2: Rutland	 2e	154	 49	61	83	4.80	 7.00
388B: Wenona	 	154	 51	 60	81	5.00	 7.30
388B2: Wenona	 2e	148	 49	 58	78	 4.70	 6.90
388C2: Wenona	 3e	147	 48	 57	77	 4.70	 6.90
397F: Boone	 7s		 			 	
413B: Gale	 2e	120	 40	49	61	 3.60	 5.30
413C2: Gale	 	114	 38	46	58	3.40	 5.00
435A: Streator		160	 52	62	82	4.60	 6.80
448B: Mona	 2e	145	 46	 56	74	3.80	 5.60
448C2: Mona	 3e	136	 43	53	70	3.50	 5.20
512B: Danabrook	 2e	166	 52	65	89	5.70	 8.40
512C2: Danabrook	 3e	156	 49	 61	84	5.40	 7.80
516A: Faxon		135	 44	 55	68	4.20	 6.20
527C2: Kidami	 2e	133	 42	50	65	3.90	 5.60
527D2: Kidami	 3e	131	 41	49	63	3.80	 5.40
530B: Ozaukee	 2e	134	 42	53	71	 3.40	 5.00
530C2: Ozaukee		127	 39		68	 3.20	 4.70

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
530C3: Ozaukee	 	117	 37	47	63	3.00	4.30
530D2: Ozaukee	 	124	 39	50	66	3.10	 4.50
530D3: Ozaukee		115	 36		61	2.90	 4.10
530E2: Ozaukee	 	113	 35		60	2.90	 4.10
530F: Ozaukee	 		 			2.60	 3.70
541B: Graymont		163	 51		84	5.30	 7.90
541B2: Graymont	 	157	 49	61	81	5.15	 7.60
541C2: Graymont	 	153	 48		79	5.00	 7.40
542A: Rooks	 1	172	 53		88	4.97	 7.30
542B: Rooks	 	170	 53	63	87	4.90	 7.27
549B: Marseilles	 	128	 43	 	67	3.30	 4.70
549C2: Marseilles	 	119	 40		63	3.00	 4.40
549D2: Marseilles	 	114	 38		60	2.90	 4.20
549F, 549G: Marseilles	 		 				
554B: Kernan	 	137	 45	 	69	4.20	 6.10
560D2: St. Clair		98	 33		46	3.20	 4.60
560E: St. Clair	 		 			3.00	 4.90
567B: Elkhart	 2e	153	 49	58	72	4.70	 6.90
572A: Loran		147	 48	58	76	 4.41	 6.50
572B: Loran		146	 48	 57	75	 4.37	 6.40

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	 Soybeans 	Winter wheat	Oats	Grass-legume hay	 Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
572C2: Loran		137	 45	 54	71	 4.10	 5.90
614A: Chenoa	2w	156	 51	61	82	4.60	 6.80
614B: Chenoa	 2e 	154	 50	60	81	4.60	 6.80
662B: Barony	 2e 	153	 48 	 59	79	5.00	 7.30
663B: Clare	 2e 	162	 50	62	86	 5.70	 8.42
667B: Kaneville	 2e 	159	 49	60	84	 5.10	 7.40
668B: Somonauk	 2e	146	 44	56	75	4.60	6.80
675B: Greenbush	 	164	 51	62	86	4.81	 7.10
675C2: Greenbush		161	 50	61	84	4.52	 6.70
679B: Blackberry		175	 54		88	6.27	 9.10
680B: Campton		150	 47		78	4.60	 6.80
712A: Spaulding		164	 53	61	80	4.86	 7.20
715A: Arrowsmith	1 1	171	 55	67	87	5.09	 7.50
732A: Appleriver	1 1	128	 41	52	64	4.07	 6.00
732B: Appleriver	 	127	 41	51	63	3.60	 5.94
791A: Rush	 	159	 49	61	82	5.50	 8.20
791B: Rush		157	 49	60	81	 5.40	 8.10
792A: Bowes		159	 50		86	 5.60	 8.30
792B: Bowes	 2e	157	 50	62	85	 5.50	 8.30

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	 Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume	 Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
794G Marseilles, Northfield, and Ritchey	8		 				
802B: Orthents, loamy	 	93	 32	35	55	3.70	 4.70
802D:	20	33			33		11,70
Orthents, loamy	 3e	90	31	34	54	3.60	4.50
804D, 804G: Orthents,	 		 				
acid	7s 						
805B: Orthents,	 						
clayey	3e 	84	29	31	51	3.30	4.20
814A Muscatune Buckhart	 1e	163	50	63	93	6.08	10.10
817AChannahon	3s	114	 39 	48	57	2.90	 4.20
Hesch	2s 						
817B Channahon Hesch	3e	110	37 	46 	56	3.00	4.30
818A Flanagan- Catlin	1 1 	157	 50 	65	90	6.00	 10.00
820E Hennepin- Casco	 6e 		 			2.40	 3.50
820G Hennepin- Casco	7e 7e 		 				
830. Landfills							
864. Pits, quarry			 				
865. Pits, gravel							
969E2 Casco Rodman	 6e 6s		 			2.40	3.50

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
969F Casco Rodman	7e 7s		 				 2.70
1103A: Houghton	 5w		 				
1480A: Moundprairie	 		 				
3073A: Ross	3w	147	 48			4.40	 6.50
3076A: Otter	3w	168	 55			5.10	 7.50
3082A: Millington	3w	154	 49			4.60	 6.80
3107A: Sawmill	3w	153	 49			4.70	 6.90
3321A: Du Page	2w	153	 49			4.80	 7.00
3451A: Lawson	3w	154	 50			4.70	 6.90
3480A: Moundprairie	3w	146	 45			4.20	 6.20
3800A:	4s		 				
7073A: Ross	1	163	 53	64	80	4.86	 7.20
8073A: Ross	2w	163	 53	64	80	4.90	 7.20
8107A: Sawmill	2w	170	 54	64	87	5.20	 7.70
8151A: Ridgeville	2s	116	 39	48	63	3.80	 5.70
8404A: Titus	3w	143	 47	55	68	4.40	 6.50
8451A: Lawson	2w	171	 55	66	87	5.20	 7.70
8516A: Faxon	 3w	115	 37		58	3.60	 5.30

 $[\]star$ Animal unit month: The amount of forage required to feed one mature cow, of approximately 1,000 pounds weight, with or without a calf, for 30 days.

Table 8.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

```
Map
                                                Map unit name
symbol
23B
       Blount silt loam, 2 to 4 percent slopes
51A
       Muscatune silt loam, 0 to 2 percent slopes
60C2
       |La Rose loam, 5 to 10 percent slopes, eroded
61A
       Atterberry silt loam, 0 to 2 percent slopes (where drained)
       Atterberry silt loam, 2 to 5 percent slopes
61B
67A
        Harpster silty clay loam, 0 to 2 percent slopes (where drained)
68A
        Sable silty clay loam, 0 to 2 percent slopes (where drained)
86B
        Osco silt loam, 2 to 5 percent slopes
87A
       Dickinson sandy loam, 0 to 2 percent slopes
87B
       Dickinson sandy loam, 2 to 5 percent slopes
87C2
       Dickinson sandy loam, 5 to 10 percent slopes, eroded
91A
        Swygert silty clay loam, 0 to 2 percent slopes
91B
        Swygert silty clay loam, 2 to 4 percent slopes
91B2
        Swygert silty clay loam, 2 to 4 percent slopes, eroded
       |Swygert silty clay loam, 4 to 6 percent slopes, eroded
91C2
       |Virgil silt loam, 0 to 2 percent slopes (where drained)
104A
105A
       Batavia silt loam, 0 to 2 percent slopes
105B
       Batavia silt loam, 2 to 5 percent slopes
125A
       |Selma loam, 0 to 2 percent slopes (where drained)
131B
       Alvin fine sandy loam, 2 to 5 percent slopes
131C2
       Alvin fine sandy loam, 5 to 10 percent slopes, eroded
       Starks silt loam, 0 to 2 percent slopes (where drained)
132A
134A
       Camden silt loam, 0 to 2 percent slopes
       |Camden silt loam, 2 to 5 percent slopes
134B
146A
       |Elliott silt loam, 0 to 2 percent slopes
146B
       |Elliott silt loam, 2 to 4 percent slopes
146B2
       |Elliott silty clay loam, 2 to 4 percent slopes, eroded
148A
       Proctor silt loam, 0 to 2 percent slopes
       |Proctor silt loam, 2 to 5 percent slopes
148B
149A
       |Brenton silt loam, 0 to 2 percent slopes
151A
       Ridgeville fine sandy loam, 0 to 2 percent slopes
151B
       Ridgeville fine sandy loam, 2 to 4 percent slopes
       Drummer silty clay loam, 0 to 2 percent slopes (where drained)
152A
154A
       Flanagan silt loam, 0 to 2 percent slopes
171A
       Catlin silt loam, 0 to 2 percent slopes
171B
       |Catlin silt loam, 2 to 5 percent slopes
171B2
       |Catlin silt loam, 2 to 5 percent slopes, eroded
198A
        Elburn silt loam, 0 to 2 percent slopes
       |Plano silt loam, 0 to 2 percent slopes
199A
199B
       |Plano silt loam, 2 to 5 percent slopes
206A
       Thorp silt loam, 0 to 2 percent slopes (where drained)
219A
       |Millbrook silt loam, 0 to 2 percent slopes (where drained)
223B
       |Varna silt loam, 2 to 4 percent slopes
223B2
       Varna silt loam, 2 to 4 percent slopes, eroded
223C2
       Varna silt loam, 4 to 6 percent slopes, eroded
228B
       Nappanee silt loam, 2 to 4 percent slopes
232A
       Ashkum silty clay loam, 0 to 2 percent slopes (where drained)
233A
        Birkbeck silt loam, 0 to 2 percent slopes
233B
       Birkbeck silt loam, 2 to 5 percent slopes
234A
       |Sunbury silt loam, 0 to 2 percent slopes
       Bryce silty clay, 0 to 2 percent slopes (where drained)
235A
236A
       |Sabina silt loam, 0 to 2 percent slopes (where drained)
242A
       |Kendall silt loam, 0 to 2 percent slopes (where drained)
243A
       St. Charles silt loam, 0 to 2 percent slopes
243B
        St. Charles silt loam, 2 to 5 percent slopes
244A
       |Hartsburg silty clay loam, 0 to 2 percent slopes (where drained)
278A
        Stronghurst silt loam, 0 to 2 percent slopes (where drained)
278B
       |Stronghurst silt loam, 2 to 5 percent slopes
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Table 8.--Prime Farmland--Continued

Map symbol	Map unit name
279B	 Rozetta silt loam, 2 to 5 percent slopes
290A	Warsaw silt loam, 0 to 2 percent slopes
290B	Warsaw silt loam, 2 to 4 percent slopes
90C2	Warsaw silt loam, 4 to 6 percent slopes, eroded
293A	Andres silt loam, 0 to 2 percent slopes
93B	Andres silt loam, 2 to 5 percent slopes
294B 294C2	Symerton silt loam, 2 to 5 percent slopes Symerton silt loam, 5 to 10 percent slopes, eroded
95A	Mokena silt loam, 0 to 2 percent slopes
295B	Mokena silt loam, 2 to 4 percent slopes
98B	Beecher silt loam, 2 to 4 percent slopes
317A	Millsdale silty clay loam, 0 to 2 percent slopes (where drained)
320B	Frankfort silt loam, 2 to 4 percent slopes
325B	Dresden silt loam, 2 to 4 percent slopes
325C2	Dresden silt loam, 4 to 6 percent slopes, eroded
327B	Fox silt loam, 2 to 4 percent slopes
327C2	Fox silt loam, 4 to 6 percent slopes, eroded
30A 344A	Peotone silty clay loam, 0 to 2 percent slopes (where drained)
44A 44B	Harvard silt loam, 0 to 2 percent slopes Harvard silt loam, 2 to 5 percent slopes
356A	Elpaso silty clay loam, 0 to 2 percent slopes (where drained)
375A	Rutland silty clay loam, 0 to 2 percent slopes
375B	Rutland silty clay loam, 2 to 5 percent slopes
375B2	Rutland silty clay loam, 2 to 5 percent slopes, eroded
888B	Wenona silt loam, 2 to 5 percent slopes
888B2	Wenona silt loam, 2 to 5 percent slopes, eroded
88C2	Wenona silty clay loam, 5 to 10 percent slopes, eroded
13B	Gale silt loam, 2 to 4 percent slopes
13C2	Gale silt loam, 4 to 6 percent slopes, eroded
135A	Streator silty clay loam, 0 to 2 percent slopes (where drained)
48B 48C2	Mona silt loam, 2 to 5 percent slopes Mona silt loam, 5 to 10 percent slopes, eroded
11002 512B	Danabrook silt loam, 2 to 5 percent slopes
516A	Faxon loam, 0 to 2 percent slopes (where drained)
527C2	Kidami loam, 4 to 6 percent slopes, eroded
530B	Ozaukee silt loam, 2 to 4 percent slopes
30C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded
541B	Graymont silt loam, 2 to 5 percent slopes
541B2	Graymont silt loam, 2 to 5 percent slopes, eroded
542A	Rooks silty clay loam, 0 to 2 percent slopes
42B	Rooks silty clay loam, 2 to 5 percent slopes
549B 554B	Marseilles silt loam, 2 to 5 percent slopes Kernan silt loam, 2 to 4 percent slopes
67B	Elkhart silt loam, 2 to 5 percent slopes
72A	Loran silt loam, 0 to 2 percent slopes
72B	Loran silt loam, 2 to 5 percent slopes
14A	Chenoa silty clay loam, 0 to 2 percent slopes
14B	Chenoa silty clay loam, 2 to 5 percent slopes
62B	Barony silt loam, 2 to 5 percent slopes
63B	Clare silt loam, 2 to 5 percent slopes
67B	Kaneville silt loam, 2 to 5 percent slopes
68B	Somonauk silt loam, 2 to 5 percent slopes
75B	Greenbush silt loam, 2 to 5 percent slopes
79B	Blackberry silt loam, 2 to 5 percent slopes Campton silt loam, 2 to 5 percent slopes
80B 12A	Campton silt loam, 2 to 5 percent slopes Spaulding silty clay loam, 0 to 2 percent slopes (where drained)
15A	Arrowsmith silt loam, 0 to 2 percent slopes (where drained)
732A	Appleriver silt loam, 0 to 2 percent slopes
732B	Appleriver silt loam, 2 to 5 percent slopes
791A	Rush silt loam, 0 to 2 percent slopes
791B	Rush silt loam, 2 to 4 percent slopes
92A	Bowes silt loam, 0 to 2 percent slopes

Table 8.--Prime Farmland--Continued

Map symbol	Map unit name
792B	 Bowes silt loam, 2 to 4 percent slopes
814A	Muscatune-Buckhart silt loams, 0 to 3 percent slopes
818A	Flanagan-Catlin silt loams, 0 to 3 percent slopes
3073A	Ross loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3480A	Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded
8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded
8107A	Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8151A	Ridgeville fine sandy loam, 0 to 2 percent slopes, occasionally flooded
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded
8516A	Faxon loam, 0 to 2 percent slopes, occasionally flooded (where drained)

Table 9.--Hydric Soils

(Only those map units that have hydric components are listed. See text for a description of hydric qualities and definitions of the hydric criteria codes)

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
 23B: Blount silt loam, 2 to 4	Blount	 ground moraine, end	 Not hydric	
percent slopes	Ashkum	moraine ground moraine, end	Hydric	2B3
	ASIRUM	moraine	Injurie	203
51A:				
Muscatune silt loam, 0 to 2 percent slopes	Muscatune Sable	ground moraine	Not hydric Hydric 	2B3
60C2: La Rose loam, 5 to 10 percent	La Rose	ground moraine, end	 Not hydric	
slopes, eroded 	Elpaso	moraine ground moraine, end moraine		2B3
60D2: La Rose loam, 10 to 18 percent slopes, eroded	La Rose	ground moraine, end	 Not hydric	
	Elpaso	ground moraine, end	Hydric	2B3
SIA: Atterberry silt loam, 0 to 2	Atterberry	ground moraine	 Not hydric	
percent slopes	Sable	ground moraine	Hydric	2B3
51B:				
Atterberry silt loam, 2 to 5 percent slopes	Atterberry Sable	ground moraine	Not hydric Hydric 	2B3
57A: Harpster silty clay loam, 0 to 2 percent slopes	Harpster	ground moraine, lake plain, outwash plain, stream terrace,	 Hydric 	2B3
	Houghton	depression ground moraine, outwash plain, end moraine	Hydric Hydric 	1,2B3
58A: Sable silty clay loam, 0 to 2	Sable	 ground moraine	 Hydric	2В3
percent slopes	Spaulding	ground moraine,	Hydric	2B3
36B: Osco silt loam, 2 to 5 percent	Osco	ground moraine	 Not hydric	
slopes	Sable	ground moraine	Hydric	2B3
36C2: Osco silt loam, 5 to 10 percent	Osco	ground moraine	 Not hydric	
slopes, eroded	Sable	ground moraine	Hydric	2B3
38B: Sparta loamy sand, 1 to 6	Sparta	stream terrace	 Not hydric	
percent slopes	Selma	outwash plain, stream terrace	Hydric	2B3

Table 9.--Hydric Soils--Continued

		1	1 1	
Map symbol and map unit name	Component	Local landform 	 Hydric	Hydric criteria
91A: Swygert silty clay loam, 0 to 2 percent slopes	Swygert	ground moraine, end	 Not hydric	
	Bryce	ground moraine, glacial lake (relict)	Hydric	2B3
91B: Swygert silty clay loam, 2 to 4 percent slopes	Swygert	ground moraine, end	 	
	Bryce	ground moraine,	Hydric	2B3
91B2:				
Swygert silty clay loam, 2 to 4 percent slopes, eroded	Swygert	ground moraine, end moraine	Not hydric	
	Bryce	ground moraine, glacial lake (relict)	Hydric 	2B3
91C2: Swygert silty clay loam, 4 to 6	Swygert	ground moraine, end	 Not hydric	
percent slopes, eroded	Bryce	moraine ground moraine, glacial lake (relict)		2B3
0100				
91C3: Swygert silty clay loam, 4 to 6 percent slopes, severely eroded	Swygert	ground moraine, end	 Not hydric 	
	Bryce	ground moraine,	Hydric	2B3
103A:				
Houghton muck, 0 to 2 percent slopes	Houghton	ground moraine, outwash plain, end moraine	Hydric	1,2B3
	Drummer	outwash plain, ground moraine	Hydric	2B3
104A:			 	
Virgil silt loam, 0 to 2 percent slopes	Virgil	outwash plain, ground moraine	Not hydric	
	Drummer	outwash plain, ground moraine	Hydric 	2B3
105A: Batavia silt loam, 0 to 2	Batavia	 outwash plain, stream	 	
percent slopes	Drummer	terrace outwash plain, ground moraine	Hydric	2B3
105B: Batavia silt loam, 2 to 5	Batavia	outwash plain	 Not hydric	
percent slopes	Drummer	outwash plain, ground moraine		2B3
105C2: Batavia silt loam, 5 to 10	Batavia	outwash plain	 Not hydric	
percent slopes, eroded	Drummer	outwash plain, ground moraine	: - :	2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	 Hydric status	Hydric criteria
125A: Selma loam, 0 to 2 percent slopes	Selma Houghton	outwash plain, stream terrace ground moraine, outwash plain, end moraine	Hydric	2B3 1,2B3
131B: Alvin fine sandy loam, 2 to 5 percent slopes	Alvin Selma	moraine	 Not hydric Hydric	 2B3
132A: Starks silt loam, 0 to 2 percent slopes	Starks	terrace	 	
146A: Elliott silt loam, 0 to 2	Drummer Elliott	outwash plain, stream terrace ground moraine, end	Hydric Not hydric	2B3
percent slopes	Ashkum	moraine ground moraine, end moraine	 Hydric 	2B3
146B: Elliott silt loam, 2 to 4 percent slopes	Elliott Ashkum	ground moraine, end moraine ground moraine, end moraine	 Not hydric Hydric	 2B3
146B2: Elliott silty clay loam, 2 to 4 percent slopes, eroded	Elliott Ashkum	ground moraine, end moraine ground moraine moraine	 Not hydric Hydric	 2B3
147B2: Clarence silty clay loam, 2 to 4 percent slopes, eroded	Clarence Bryce	ground moraine ground moraine, glacial lake (relict)	 Not hydric Hydric 	 2B3
148A: Proctor silt loam, 0 to 2 percent slopes	Proctor	outwash plain, stream terrace outwash plain, ground moraine	į į	 2B3
148B: Proctor silt loam, 2 to 5 percent slopes	Proctor	outwash plain, stream terrace outwash plain, stream terrace	 Not hydric Hydric	 2B3
148C2: Proctor silt loam, 5 to 10 percent slopes, eroded	Proctor	outwash plain, stream terrace outwash plain, stream terrace	į į	 2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
149A: Brenton silt loam, 0 to 2 percent slopes	Brenton	outwash plain, stream		
percent slopes	Drummer	outwash plain, ground moraine	Hydric Hydric	2B3
152A: Drummer silty clay loam, 0 to 2 percent slopes	Drummer	outwash plain, ground moraine	 	2B3
	Harpster	ground moraine, lake plain, outwash plain, stream terrace,	Hydric	2B3
 	Houghton	depression ground moraine, outwash plain, end moraine		1,2B3
154A:	Flanagan	 ground moraine	 	
percent slopes	Elpaso	ground moraine, end	Hydric 	2B3
171A: Catlin silt loam, 0 to 2 percent slopes	Catlin	ground moraine, end	 Not hydric 	
	Elpaso	ground moraine, end	Hydric	2B3
171B: Catlin silt loam, 2 to 5 percent slopes	Catlin	ground moraine, end	 	
	Elpaso	ground moraine, end	Hydric	2B3
171B2:	Catlin	 ground moraine, end	 Not hydric	
percent slopes, eroded	Elpaso	moraine ground moraine, end moraine	Hydric	2B3
171C2: Catlin silt loam, 5 to 10	Catlin	ground moraine, end	 Not hydric	
percent slopes, eroded	Elpaso	moraine ground moraine, end moraine		2B3
171C3: Catlin silty clay loam, 5 to 10 percent slopes, severely eroded	Catlin	ground moraine, end	 	
	Elpaso	ground moraine, end	Hydric 	2B3
193C2: Mayville silt loam, 5 to 10 percent slopes, eroded	Mayville	end moraine, ground moraine	 Not hydric 	
- 	Elpaso	ground moraine, end moraine	Hydric	2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
198A: Elburn silt loam, 0 to 2	Elburn	outwash plain, stream	 Not hydric	
percent slopes	Drummer	terrace outwash plain, ground	Hydric	2B3
	Thorp	moraine depression	Hydric	2B3
199A: Plano silt loam, 0 to 2 percent slopes	Plano	outwash plain, stream	 Not hydric 	
- **	Drummer	outwash plain, ground moraine	Hydric	2B3
199B: Plano silt loam, 2 to 5 percent slopes	Plano	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
199C2: Plano silt loam, 5 to 10 percent slopes, eroded	Plano	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
206A: Thorp silt loam, 0 to 2 percent slopes	Thorp	outwash plain, ground moraine	 	2B3
210A: Lena muck, 0 to 2 percent slopes	Lena	ground moraine,		1,2B3
219A: Millbrook silt loam, 0 to 2 percent slopes	Millbrook	outwash plain, stream	 Not hydric	
percent slopes	Drummer	outwash plain, ground moraine	Hydric	2B3
223B: Varna silt loam, 2 to 4 percent slopes	Varna	ground moraine, end	 Not hydric 	
	Ashkum	ground moraine, end	Hydric	2B3
223B2: Varna silt loam, 2 to 4 percent slopes, eroded	Varna	ground moraine, end	 Not hydric	
	Ashkum	ground moraine, end	Hydric Hydric	2B3
223C2: Varna silt loam, 4 to 6 percent slopes, eroded	Varna	ground moraine, end	 Not hydric 	
* ··· · · · · · · · · · · · · · · · · ·	Ashkum	ground moraine, end	Hydric	2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
223C3: Varia silty clay loam, 4 to 6	Varna	ground moraine, end	 Not hydric	
percent slopes, severely eroded	Ashkum	moraine ground moraine, end moraine		2B3
223D2: Varna silt loam, 6 to 12 percent slopes, eroded	Varna	ground moraine, end	 Not hydric 	
	Ashkum	ground moraine, end	Hydric 	2B3
223D3: Varna silty clay loam, 6 to 12 percent slopes, severely eroded	Varna	ground moraine, end	 Not hydric	
percent stopes, severery eroded	Ashkum	ground moraine, end	Hydric 	2B3
228B: 	Nappanee	ground moraine, end	 	
percent slopes 	Bryce	moraine ground moraine, glacial lake (relict)	 Hydric 	2B3
228C2: Nappanee silty clay loam, 4 to 6	Nappanee	ground moraine, end	 Not hydric	
percent slopes, eroded	Bryce	moraine ground moraine, glacial lake (relict)	 Hydric 	2B3
228C3: Nappanee silty clay loam, 4 to 6 percent slopes, severely eroded	Nappanee	ground moraine, end	 	
	Bryce	ground moraine, glacial lake (relict)	Hydric	2B3
232A: Ashkum silty clay loam, 0 to 2 percent slopes	Ashkum	ground moraine, end	 	2B3
	Houghton	ground moraine, outwash plain, end moraine	Hydric 	1,2B3
233A: Birkbeck silt loam, 0 to 2 percent slopes	Birkbeck	ground moraine, end	 	
	Elpaso	ground moraine, end	Hydric	2B3
233B: Birkbeck silt loam, 2 to 5	Birkbeck	ground moraine, end	 	
hercent stokes	Elpaso	ground moraine, end		2B3
233C2: Birkbeck silt loam, 5 to 10	Birkbeck	ground moraine, end	 	
percent slopes, eroded	Elpaso	moraine ground moraine, end moraine	Hydric Hydric	2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	 Local landform 	Hydric status 	Hydric criteria
234A: Sunbury silt loam, 0 to 2 percent slopes	Sunbury	 till plain, ground moraine	 Not hydric 	
	Elpaso	ground moraine, end	Hydric 	2B3
235A: Bryce silty clay, 0 to 2 percent slopes	Bryce	 ground moraine, glacial lake (relict)	 	2B3
	Rantoul	ground moraine, lake	Hydric	3,2B3
236A: Sabina silt loam, 0 to 2 percent slopes	Sabina	 ground moraine, till plain	 Not hydric 	
	Elpaso	ground moraine, end	Hydric	2B3
238A: Rantoul silty clay, 0 to 2 percent slopes	Rantoul	 ground moraine, lake plain	 	3,2B3
	Houghton	ground moraine, outwash plain, end moraine	Hydric 	1,2B3
241C3: Chatsworth silty clay, 4 to 6	Chatsworth	ground moraine, end	 Not hydric	
percent slopes, severely eroded	Bryce	moraine ground moraine, glacial lake (relict)	Hydric Hydric 	2B3
241D3: Chatsworth silty clay, 6 to 12 percent slopes, severely eroded	Chatsworth	ground moraine, end moraine	 Not hydric 	
	Bryce	ground moraine, glacial lake (relict)	Hydric 	2B3
242A: Kendall silt loam, 0 to 2 percent slopes	Kendall	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
243A: St. Charles silt loam, 0 to 2 percent slopes	St. Charles	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
243B: St. Charles silt loam, 2 to 5 percent slopes	St. Charles	outwash plain, stream terrace	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
244A: Hartsburg silty clay loam, 0 to 2 percent slopes	Hartsburg	 outwash plain, ground moraine 	 Hydric 	2В3
279B: Rozetta silt loam, 2 to 5 percent slopes	Rozetta Sable	ground moraine	 Not hydric Hydric	 2B3

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
293A: Andres silt loam, 0 to 2 percent	Andres	 ground moraine, lake	 Not hydric	
slopes 	Ashkum	plain ground moraine, end moraine		2B3
293B: Andres silt loam, 2 to 5 percent slopes	Andres	ground moraine, lake		
stopes	Ashkum	ground moraine, end	Hydric Hydric	2B3
294B: Symerton silt loam, 2 to 5 percent slopes	Symerton	 ground moraine, lake plain		
percent stopes	Ashkum	ground moraine, end	Hydric Hydric	2B3
294C2: Symerton silt loam, 5 to 10 percent slopes, eroded	Symerton	ground moraine, lake	 	
percent slopes, eroded	Ashkum	ground moraine, end	Hydric Hydric	2B3
P5A: Mokena silt loam, 0 to 2 percent slopes	Mokena	 ground moraine, lake plain	 	
stopes	Bryce	ground moraine, glacial lake (relict)	Hydric Hydric	2B3
295B:	Mokena	 ground moraine, lake	 	
slopes 	Bryce	plain ground moraine, glacial lake (relict)		2B3
198B: Beecher silt loam, 2 to 4	Beecher	ground moraine, end	 	
percent slopes 	Ashkum	moraine ground moraine, end moraine		2B3
314A:	Joliet	 stream terrace	 	2B3
S15B: Channahon silt loam, 2 to 4	Channahon	outwash plain, stream	 Not hydric	
percent slopes 	Faxon	outwash plain, stream	Hydric Hydric	2B3
17A:	Millsdale	 stream terrace	 	2B3
220B:	Frankfort		 	
percent slopes 	Bryce	moraine ground moraine, glacial lake (relict)	 Hydric 	2B3

Table 9.--Hydric Soils--Continued

Map symbol and amap unit name	Component	Local landform	Hydric status	Hydric criteria
320C2: Frankfort silty clay loam, 4 to 6 percent slopes, eroded	Frankfort	ground moraine, end moraine ground moraine, glacial lake (relict)	 Not hydric Hydric	 2B3
330A:		glacial lake (leffec)		
Peotone silty clay loam, 0 to 2 percent slopes	Peotone Houghton	ground moraine ground moraine, outwash plain, end moraine	 Hydric Hydric 	2B3 1,2B3
344A: Harvard silt loam, 0 to 2 percent slopes	Harvard	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric 	2B3
344B: Harvard silt loam, 2 to 5 percent slopes	Harvard	outwash plain, stream	 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
344C2: Harvard silt loam, 5 to 10 percent slopes, eroded	Harvard	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
356A: Elpaso silty clay loam, 0 to 2	Elpaso	 ground moraine, end	 	2B3
percent slopes	Harpster	moraine ground moraine, lake plain, outwash plain, stream terrace, depression	Hydric	2B3
375A: Rutland silty clay loam, 0 to 2 percent slopes	Rutland	ground moraine, lake	 	
	Streator	ground moraine, lake plain, depression	Hydric	2B3
375B: Rutland silty clay loam, 2 to 5 percent slopes	Rutland	 ground moraine, lake plain	 	
	Streator	ground moraine, lake plain, depression	Hydric	2B3
375B2: Rutland silty clay loam, 2 to 5	Rutland	ground moraine, lake	 Not hydric	
percent slopes, eroded	Streator	plain ground moraine, lake plain, depression	 Hydric 	2B3
388B:	_			
Wenona silt loam, 2 to 5 percent slopes	Wenona Streator	ground moraine, lake plain ground moraine, lake	Not hydric Hydric	2B3
	-	plain, depression		

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
388B2: Wenona silt loam, 2 to 5 percent slopes, eroded	Wenona	ground moraine, lake	 Not hydric 	
	Streator	ground moraine, lake	Hydric	2B3
388C2: Wenona silty clay loam, 5 to 10 percent slopes, eroded	Wenona Streator	ground moraine ground moraine, lake plain, depression	 Not hydric Hydric	 2B3
435A: Streator silty clay loam, 0 to 2 percent slopes	Streator	ground moraine, lake	 	2B3
448B:	Mona	ground moraine, glacial lake (relict)	 Not hydric 	
	Bryce	ground moraine,	Hydric 	2B3
448C2: Mona silt loam, 5 to 10 percent	Mona	 ground moraine	 	
slopes, eroded	Bryce	ground moraine, glacial lake (relict)	Hydric 	2B3
512B:	Danabrook	ground moraine, end moraine	 Not hydric 	
	Elpaso	ground moraine, end	Hydric 	2B3
512C2: Danabrook silt loam, 5 to 10 percent slopes, eroded	Danabrook	ground moraine, end	 Not hydric 	
į	Elpaso	ground moraine, end moraine	Hydric	2B3
516A: Faxon loam, 0 to 2 percent slopes	Faxon	outwash plain, stream		2B3
	Peotone	ground moraine	Hydric	2B3
527C2: Kidami loam, 4 to 6 percent slopes, eroded	Kidami	end moraine, ground moraine	 Not hydric 	
	Elpaso	ground moraine, end	Hydric	2B3
527D2: Kidami loam, 6 to 12 percent slopes, eroded	Kidami	end moraine, ground	 	
	Elpaso	ground moraine, end	Hydric	2B3
530B: Ozaukee silt loam, 2 to 4	Ozaukee	ground moraine, end	 Not hydric	
percent slopes 	Ashkum	moraine ground moraine, end moraine	Hydric Hydric	2B3

Table 9.--Hydric Soils--Continued

		1	1	1
Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria
		!	<u> </u>	
530C2: Ozaukee silt loam, 4 to 6 percent slopes, eroded	Ozaukee	end moraine, ground moraine	 Not hydric	
	Ashkum	ground moraine, end	Hydric	2B3
530C3: Ozaukee silty clay loam, 4 to 6 percent slopes, severely eroded	Ozaukee	end moraine, ground moraine	 Not hydric	
	Ashkum	ground moraine, end	Hydric	2B3
530D2:				
Ozaukee silt loam, 6 to 12 percent slopes, eroded	Ozaukee	end moraine, ground moraine	Not hydric	
	Ashkum	ground moraine, end	Hydric 	2B3
530D3:				
Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded		end moraine, ground moraine	Not hydric	
	Ashkum	ground moraine, end	Hydric	2B3
541B:				
Graymont silt loam, 2 to 5 percent slopes	Graymont	ground moraine, end moraine	Not hydric	
 	Elpaso	ground moraine, end moraine	Hydric	2B3
541B2:				
Graymont silt loam, 2 to 5 percent slopes, eroded	Graymont	ground moraine, end	Not hydric	
	Elpaso	ground moraine, end moraine	Hydric	2B3
541C2:				
Graymont silt loam, 5 to 10 percent slopes, eroded	Graymont	end moraine, ground moraine	Not hydric	
i !	Elpaso	ground moraine, end moraine	Hydric	2B3
542A:				
Rooks silty clay loam, 0 to 2 percent slopes	Rooks Hartsburg	ground moraine outwash plain, ground	Not hydric Hydric	 2B3
	narebbarg	moraine		
542B:			į į	
Rooks silty clay loam, 2 to 5 percent slopes	Rooks Hartsburg	ground moraine outwash plain, ground moraine	Not hydric Hydric	 2B3
554B: Kernan silt loam, 2 to 4 percent	Kernan	ground moraine, lake	 Not hydric	
slopes 	Streator	plain ground moraine, lake plain, depression	Hydric	2B3
572A:				
Loran silt loam, 0 to 2 percent	Loran	ground moraine	Not hydric	
slopes	Drummer	outwash plain, ground moraine	Hydric	2B3
l			1	

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform	Hydric status	Hydric criteria	
572B: Loran silt loam, 2 to 5 percent slopes	Loran Drummer	ground moraine outwash plain, ground moraine	 Not hydric Hydric	 2B3	
572C2: Loran silt loam, 5 to 10 percent slopes, eroded	Loran Drummer	ground moraine outwash plain, ground moraine	 Not hydric Hydric	 2B3	
614A: Chenoa silty clay loam, 0 to 2 percent slopes	Chenoa Elpaso	ground moraine, end moraine ground moraine, end moraine	 Not hydric Hydric	 2B3	
614B: Chenoa silty clay loam, 2 to 5 percent slopes	Chenoa Elpaso	ground moraine, end moraine ground moraine, end moraine	 Not hydric Hydric	 2B3	
662B: Barony silt loam, 2 to 5 percent slopes	Barony Drummer	outwash plain, stream terrace outwash plain, ground moraine	 Not hydric Hydric	 2B3	
663B: Clare silt loam, 2 to 5 percent slopes	Clare Drummer	outwash plain, stream terrace outwash plain, ground moraine	į į	 2B3	
667B: Kaneville silt loam, 2 to 5 percent slopes 	Kaneville Drummer	outwash plain, stream terrace outwash plain, ground moraine	į į	 2B3	
668B: Somonauk silt loam, 2 to 5 percent slopes	Somonauk	outwash plain, stream terrace outwash plain, ground moraine	 Not hydric Hydric	 2B3	
675B: Greenbush silt loam, 2 to 5 percent slopes	Greenbush Sable	ground moraine	 Not hydric Hydric	 2B3	
679B: Blackberry silt loam, 2 to 5 percent slopes	Blackberry	outwash plain, stream terrace outwash plain, ground moraine	į į	 2B3	
680B: Campton silt loam, 2 to 5 percent slopes	Campton Drummer	outwash plain, stream terrace outwash plain, ground moraine	į į	 2B3	

Table 9.--Hydric Soils--Continued

Map symbol and map unit name			Hydric status	Hydric criteria
712A: Spaulding silty clay loam, 0 to 2 percent slopes	Spaulding	ground moraine, depression	 Hydric 	2B3
715A: Arrowsmith silt loam, 0 to 2 percent slopes	Arrowsmith Sable Spaulding	ground moraine ground moraine ground moraine,	 Not hydric Hydric Hydric	 2B3 2B3
İ		depression		
791A: Rush silt loam, 0 to 2 percent slopes	Rush	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
791B:				
Rush silt loam, 2 to 4 percent slopes	Rush Drummer	outwash plain, stream terrace outwash plain, ground	į į	2B3
İ		moraine	i i I I	
792A: Bowes silt loam, 0 to 2 percent slopes	Bowes	outwash plain, stream	 Not hydric 	
	Drummer	outwash plain, ground moraine	 Hydric 	2B3
792B: Bowes silt loam, 2 to 4 percent	Bowes	 outwash plain, stream terrace	 Not hydric	
slopes 	Drummer	outwash plain, ground moraine	Hydric Hydric	2B3
802B:				
Orthents, loamy, undulating	Orthents, loamy	outwash plain, ground moraine	į į	
	Drummer	outwash plain, ground moraine	Hydric	2B3
	Elpaso	ground moraine, end	Hydric 	2B3
302D: Orthents, loamy, rolling	Orthents,	ground moraine, outwash plain	 Not hydric 	
	Drummer	outwash plain, ground moraine	Hydric	2B3
İ	Elpaso	ground moraine, end moraine	Hydric	2B3
805B:			 	
Orthents, clayey, undulating	Orthents, clayey Ashkum	ground moraine, lake plain ground moraine, end	Not hydric	202
	Bryce	ground moraine, end moraine ground moraine,	Hydric Hydric	2B3 2B3
	-	glacial lake (relict)	į į	
 	Houghton	ground moraine, outwash plain, end moraine	Hydric 	1,2B3
!	Peotone	ground moraine	Hydric	2B3

Table 9.--Hydric Soils--Continued

Map symbol and Component Local map unit name		Local landform	Hydric status	Hydric criteria	
B14A:					
Muscatune-Buckhart silt loams,	Muscatune	ground moraine	Not hydric		
0 to 3 percent slopes	Buckhart	ground moraine	Not hydric		
	Sable	ground moraine	Hydric	2B3	
 B17A:					
Channahon-Hesch fine sandy	Channahon	stream terrace, flood	Not hydric		
loams, 0 to 2 percent slopes		plain step, outwash			
	Hesch	plain stream terrace,	Not budwis		
	nescn	flood plain step,	Not hydric		
	Faxon	outwash plain, stream	Hydric	2B3	
İ		terrace	į į		
	Peotone	ground moraine	Hydric	2B3	
 817B:		 			
Channahon-Hesch fine sandy	Channahon	stream terrace, flood	Not hydric		
loams, 2 to 6 percent slopes		plain step, outwash	i i		
		plain			
	Hesch	stream terrace,	Not hydric		
	Faxon	flood plain step, outwash plain, stream	Hydric	2B3	
	raxon	terrace	Mydric	203	
İ	Peotone	ground moraine	Hydric	2B3	
			İ İ		
818A:	Flanagan	ground moraine	 Not hydric		
Flanagan-Catlin silt loams, 0 to 3 percent slopes	Catlin	ground moraine, end	Not hydric		
		moraine			
	Elpaso	ground moraine, end	Hydric	2B3	
		moraine			
1103A:					
Houghton muck, undrained, 0 to 2	Houghton	ground moraine,	Hydric	1,3,2B3	
percent slopes		outwash plain			
	Drummer	outwash plain, ground	Hydric	2B3	
		moraine			
1480A:			i i		
Moundprairie silty clay loam,	Moundprairie	flood plain	Hydric	1,3,2B3	
undrained, 0 to 2 percent					
slopes, frequently flooded					
3076A:			i i		
Otter silt loam, 0 to 2 percent	Otter	flood plain	Hydric	2B3	
slopes, frequently flooded	Houghton	ground moraine,	Hydric	1,2B3	
		outwash plain, end moraine			
	Millington	flood plain	Hydric	2B3	
			,		
3082A:			ļ <u>į</u>		
Millington silt loam, 0 to 2	Millington	flood plain	Hydric	2B3	
percent slopes, frequently flooded	Sawmill	flood plain	Hydric	2B3	
3107A:		İ	į į		
Sawmill silty clay loam, 0 to 2	Sawmill	flood plain	Hydric	2B3	
percent slopes, frequently	Millington	flood plain	Hydric	2B3	
flooded		1	1		

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Local landform 	Hydric status	Hydric criteria
3321A:		 		
Du Page silt loam, 0 to 2 percent slopes, frequently flooded	Du Page Millington	flood plain flood plain 	Not hydric Hydric	2B3
3451A:		 		
Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Lawson Sawmill	flood plain flood plain	Not hydric Hydric	2B3
3480A:				
Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded	Moundprairie Millington	flood plain flood plain 	Hydric Hydric 	2B3 2B3
8107A: Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded	Sawmill	 flood plain 	Hydric	2B3
3404A:				
Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	Titus Sawmill	flood plain flood plain 	Hydric Hydric 	2B3 2B3
Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	Lawson Sawmill	flood plain flood plain	Not hydric Hydric	2B3
B516A:				
Faxon loam, 0 to 2 percent slopes, occasionally flooded	Faxon Titus	flood plain flood plain	Hydric Hydric	2B3 2B3

Table 10.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol	 	Trees having predict	ted 20-year average h	eignt, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
23B:	 	 		 	
Blount	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce 	Carolina poplar
51A: Muscatune	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood pin oak
60C2, 60D2: La Rose	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwoo eastern white pin

Map symbol	 	Trees having predic	ted 20-year average h	eight, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
61A, 61B: Atterberry	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
67A: Harpster	 Common winterberry, gray dogwood, redosier dogwood	 Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	 Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	 Carolina poplar, eastern cottonwood 	
68A: Sable	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood		 Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak
86B, 86C2: Osco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	

Table 10.--Windbreaks and Environmental Plantings--Continued

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	 	rrees naving predic	ted 20-year average h	eignt, in reet, of	
and soil name	<8	8-15	16-25	26-35	>35
87A, 87B, 87C2: Dickinson	American cranberrybush, herican hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood,	white pine 	 Carolina poplar 	
88B, 88D: Sparta	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	blue spruce, common hackberry, eastern redcedar, red maple 	İ	Eastern white pine
91A, 91B, 91B2, 91C2, 91C3: Swygert	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	 Norway spruce 	Carolina poplar

Map symbol		Trees having predic	ted 20-year average h	eight, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
103A:					
Houghton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	hazel alder, nannyberry, roughleaf dogwood	Arborvitae 	Pin oak, river birch, swamp white oak	Carolina poplar, eastern cottonwood
104A:					
Virgil	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood pin oak
105A, 105B, 105C2: Batavia	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	 Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood eastern white pine

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
125A: Selma	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	•	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	 Carolina poplar, eastern cottonwood pin oak 	
131B: Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple		 Norway spruce, common hackberry, pin oak 	 Carolina poplar, eastern white pine 	
131C2: Alvin	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple		 Norway spruce, common hackberry, pin oak, tuliptree 	 Carolina poplar, eastern white pine 	
132A: Starks	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak 	

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
134A, 134B, 134C2, 134D2, 134D3, 134F:	 	 	 	 	 	
Camden	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood eastern white pine 	
146A, 146B, 146B2:						
Elliott	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	Norway spruce	Carolina poplar	
147B2:	 		 			
Clarence	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	Norway spruce	Carolina poplar	

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
148A, 148B, 148C2:						
Proctor	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine 	
149A:						
Brenton	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood, pin oak 	
151A, 151B:					į	
Ridgeville	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak 	Carolina poplar, eastern cottonwood, pin oak 	

Map symbol		Trees having predic	Trees having predicted 20-year average height, in feet, of			
and soil name	<8	8-15	16-25	26-35	>35	
152A: Drummer	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood		Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak	
154A: Flanagan	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak 	
171A, 171B, 171B2, 171C2, 171C3: Catlin	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 	

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
193C2: Mayville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine	
198A: Elburn	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak	
199A, 199B, 199C2: Plano	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine	
206A: Thorp	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum		

		Trees having predic	ted 20-year average h	eight, in feet, of	
Map symbol	İ				
and soil name	<8	8-15	16-25	26-35	>35
210A: Lena	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	hazel alder, nannyberry, roughleaf dogwood	 Arborvitae 	Pin oak, river birch, swamp white oak	Carolina poplar, eastern cottonwood
219A:	 	 	 	 	
Millbrook	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak
223B, 223B2, 223C2,					
223C3, 223D2:					
Varna	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
223D3:]	
Varna	American plum, black chokeberry, coralberry, gray dogwood, mapleleaf arrowwood		·		Eastern cottonwood, imperial Carolina poplar

 ${\tt Table \ 10.--Windbreaks \ and \ Environmental \ Plantings--Continued}$

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
228B, 228C2, 228C3:		 			 	
Nappanee	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce - - - - - - -	Carolina poplar 	
232A:		 	 		 	
Ashkum	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	!	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak 	Carolina poplar, eastern cottonwood pin oak 	
233A, 233B, 233C2: Birkbeck	 American hazelnut, black chokeberry, common elderberry, common juniper,	 American plum, American witchhazel, blackhaw, common	 Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern	 Douglas fir, Norway spruce, black walnut, blackgum, common hackberry,	 Carolina poplar, eastern cottonwood eastern white pind	
	common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	chokecherry, common		northern red oak, pin oak, tuliptree		

Table	10windbre	eaks and	i Environme	ental Pla	intings	Continue	ea.
	Trees	having	predicted	20-year	average	height,	in

	Trees having predicted 20-year average height, in feet, of				
Map symbol					
and soil name	<8	8-15	16-25	26-35	>35
234A:	ļ	!		!	ļ
Sunbury	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood,
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak
	chokeberry, common	serviceberry,	spruce, common	maple, swamp white	l .
	elderberry, common	prairie crabapple,	persimmon, eastern	oak, sweetgum	1
	juniper, common	roughleaf dogwood,	redcedar, green		1
	ninebark, common winterberry,	rusty blackhaw, southern arrowwood,	hawthorn,		1
	northern spicebush,	witchhazel	nannyberry, pecan, shingle oak		1
	redosier dogwood,	witchnazei	Shingle Oak		1
	silky dogwood	 	 		1
	sliky dogwood	 	 		1
235A:	1	I I	 		I I
Bryce	American	Cockspur hawthorn,	Arborvitae,	Red maple, river	Carolina poplar,
22700	cranberrybush,	hazel alder,	blackgum, common	birch, swamp white	eastern cottonwood,
	black chokeberry,	nannyberry,	hackberry, green	oak	pin oak
	buttonbush, common	roughleaf dogwood	hawthorn, shingle		İ
	elderberry, common	İ	oak	i	İ
	ninebark, common	İ	İ	i	į
	winterberry, gray	į	İ	İ	İ
	dogwood, highbush	į	İ	İ	İ
	blueberry, northern				
	spicebush, redosier				
	dogwood, silky				
	dogwood				
236A:					
Sabina	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood,
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak
	chokeberry, common	serviceberry,	spruce, common	maple, swamp white	ļ
	elderberry, common	prairie crabapple,	persimmon, eastern	oak, sweetgum	!
	juniper, common	roughleaf dogwood,	redcedar, green		
	ninebark, common	rusty blackhaw,	hawthorn,		
	winterberry,	southern arrowwood,	nannyberry, pecan,		
	northern spicebush,	witchhazel	shingle oak		
	redosier dogwood,		 		
	silky dogwood	 	 		1
			I	1	1

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	 	Trees having predict	ted 20-year average h	eight, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
238A: Rantoul	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	•	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	 Carolina poplar, eastern cottonwood pin oak
241C3: Chatsworth	 Coralberry, mapleleaf viburnum, redosier dogwood, roughleaf dogwood	American cranberrybush, Ohio buckeye, bitternut hickory, bur oak, chinkapin oak, cockspur hawthorn, common chokecherry, eastern redcedar	Austrian pine, common hackberry, eastern redcedar, thornless honeylocust	 Carolina poplar, Norway spruce 	 Carolina poplar
241D3, 241E3, 241F, 241G: Chatsworth		American cranberrybush, Ohio buckeye, bitternut hickory, bur oak, chinkapin oak, cockspur hawthorn, common chokecherry, eastern redcedar	Austrian pine, common hackberry, thornless honeylocust	 Carolina poplar 	
242A: Kendall	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak

		Trees having predic	ted 20-year average h	eight, in feet, of	
Map symbol				<u> </u>	
and soil name	<8	8-15	16-25	26-35	>35
243A, 243B, 243C2:	 	 	 		
St. Charles	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood,	prairie crabapple, roughleaf dogwood, smooth sumac,	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
244A: Hartsburg	silky dogwood Common winterberry, gray dogwood, redosier dogwood	southern arrowwood Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	 - Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood	
278A, 278B:	 		 -	į I	į I
Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak
279B:					
Rozetta	American hazelnut, black chokeberry,	American plum, American	Washington hawthorn, arborvitae, blue	Douglas fir, Norway spruce, black	Carolina poplar, eastern cottonwood,

		Common Cracerotti,		DPIGOO, COMMICIN	" " " " " " " " " " " " " " " " " " "	oupcoin milito pino
		common juniper,	blackhaw, common	persimmon, eastern	common hackberry,	
		common ninebark,	chokecherry, common	redcedar,	northern red oak,	
		common winterberry,	serviceberry,	nannyberry, pecan,	pin oak, tuliptree	
		coralberry,	prairie crabapple,	white oak		
		mapleleaf viburnum,	roughleaf dogwood,	İ		
		redosier dogwood,	smooth sumac,	i İ	İ	İ
		silky dogwood	southern arrowwood		İ	İ
7	244A:					
	Hartsburg	Common winterberry,	Common pawpaw,	Arborvitae, bur oak,	Carolina poplar,	
		gray dogwood,	nannyberry,	common hackberry,	eastern cottonwood	
		redosier dogwood	roughleaf dogwood,	eastern redcedar,		
			silky dogwood	green hawthorn		
	0703 070D		 -			
•	278A, 278B:				 	
	Stronghurst	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,
		cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood,
		Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak
		chokeberry, common	serviceberry,	spruce, common	maple, swamp white	
		elderberry, common	prairie crabapple,	persimmon, eastern	oak, sweetgum	
		juniper, common	roughleaf dogwood,	redcedar, green		
		ninebark, common	rusty blackhaw,	hawthorn,		
		winterberry,	southern arrowwood,	nannyberry, pecan,		
		northern spicebush,	witchhazel	shingle oak		
		redosier dogwood,				
		silky dogwood				
7	279B:					
	Rozetta	American hazelnut,	American plum,	Washington hawthorn,	Douglas fir, Norway	Carolina poplar,
		black chokeberry,	American	arborvitae, blue	spruce, black	eastern cottonwood,
		common elderberry,	witchhazel,	spruce, common	walnut, blackgum,	eastern white pine
		common juniper,	blackhaw, common	persimmon, eastern	common hackberry,	1
		Juniput,	Diacinaw, common	perbinmen, captern	COMMON NUCLECTIA	l .

chokecherry, common redcedar,

nannyberry, pecan,

white oak

serviceberry,

smooth sumac,

prairie crabapple,

roughleaf dogwood,

southern arrowwood

northern red oak,

pin oak, tuliptree

common ninebark,

coralberry,

silky dogwood

common winterberry,

mapleleaf viburnum, redosier dogwood,

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
280C2: Fayette	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine	
290A, 290B, 290C2: Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	white pine 	 Carolina poplar 	 	
293A, 293B: Andres	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak 	
294B, 294C2: Symerton	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine 	

Map symbol	Trees having predicted 20-year average height, in feet, of					
and soil name	<8	8-15	16-25	26-35	>35	
295A, 295B: Mokena	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood pin oak	
298B: Beecher	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	 Norway spruce 	 Carolina poplar 	
311B: Ritchey	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	 	 	
314A: Joliet	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	 Bur oak, chinkapin oak, thornless honeylocust 	 	 	

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	 	Trees having predic	ted 20-year average h	eight, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
315B: Channahon	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	 	
317A: Millsdale	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	 Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	 Carolina poplar, eastern cottonwood pin oak
318B, 318C2: Lorenzo	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood,	white pine 	 Carolina poplar 	
320B, 320C2: Frankfort	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	 Norway spruce 	 Carolina poplar

Map symbol	 	Trees having predic	ted 20-year average h	eight, in feet, of	
and soil name	<8	8-15	16-25	26-35	>35
325B, 325C2: Dresden	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	white pine 	Carolina poplar	
327B, 327C2, 327D2: Fox	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	white pine 	 Carolina poplar 	
330A: Peotone	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	 Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
344A, 344B: Harvard	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine

Table 10.--Windbreaks and Environmental Plantings--Continued

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
344C2: Harvard	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		
356A: Elpaso	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	 Red maple, river birch, swamp white oak 	 Carolina poplar, eastern cottonwood, pin oak		
375A, 375B, 375B2: Rutland	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak		
388B, 388B2, 388C2: Wenona	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	 Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	 Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine		

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
397F: Boone	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	white pine 	Carolina poplar	 		
413B, 413C2: Gale	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	white pine 	 Carolina poplar 	 		
435A: Streator	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	 Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	 Red maple, river birch, swamp white oak 	 Carolina poplar, eastern cottonwood, pin oak		
448B, 448C2: Mona	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		

Table 10.--Windbreaks and Environmental Plantings--Continued

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
E12B E12G2.							
512B, 512C2: Danabrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak			
516A:				 			
Faxon	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood		Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak 	Carolina poplar, eastern cottonwood, pin oak 		
527C2, 527D2: Kidami	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	 Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	 Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine 		

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
530B, 530C2, 530C3, 530D2, 530D3, 530E2, 530F:	 	 	 	 	 		
Ozaukee	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	Norway spruce	Carolina poplar		
541B, 541B2, 541C2: Graymont	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood eastern white pine 		
542A, 542B: Rooks	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood pin oak 		

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol		riees maving predic	ted 20-year average h	ergne, in reet, or	
and soil name	<8	8-15	16-25	26-35	>35
549B, 549C2, 549D2, 549F, 549G:	 	 	 	 	
Marseilles	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood,	white pine 	Carolina poplar - - - - -	
554B:					
Kernan	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood pin oak
560D2, 560E:					
St. Clair	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	Norway spruce	Carolina poplar
567B:	İ		İ	İ	
Elkhart	American hazelnut, common winterberry, gray dogwood, redosier dogwood	Blackhaw, common chokecherry, common pawpaw, nannyberry, roughleaf dogwood, silky dogwood		Carolina poplar, eastern cottonwood 	

Map symbol								
and soil name	<8	8-15	16-25	26-35	>35			
572A, 572B, 572C2:								
Loran	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,			
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood			
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak			
	chokeberry, common	serviceberry,	spruce, common	maple, swamp white				
	elderberry, common	prairie crabapple,	persimmon, eastern	oak, sweetgum				
	juniper, common	roughleaf dogwood,	redcedar, green					
	ninebark, common	rusty blackhaw,	hawthorn,					
	winterberry,	southern arrowwood,	nannyberry, pecan,					
	northern spicebush,	witchhazel	shingle oak					
	redosier dogwood,							
	silky dogwood							
614A, 614B:	 	 	 		 			
Chenoa	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,			
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood			
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak			
	chokeberry, common	serviceberry,	spruce, eastern	maple, swamp white				
	elderberry, common	prairie crabapple,	redcedar, green	oak				
	juniper, common	roughleaf dogwood,	hawthorn,					
	ninebark, common	rusty blackhaw,	nannyberry, pecan,					
	winterberry,	southern arrowwood,	shingle oak					
	northern spicebush,	witchhazel						
	redosier dogwood,							
	silky dogwood							
662B:	İ	 -	 	 	İ			
Barony	American hazelnut,	American plum,	 Washington hawthorn,	Douglas fir Norway	Carolina poplar,			
	black chokeberry,	American prom,	arborvitae, blue	spruce, black	eastern cottonwood			
	common elderberry,	witchhazel,	spruce, common	walnut, blackgum,	eastern white pine			
	common juniper,	blackhaw, common	persimmon, eastern	common hackberry,	cascern white bine			
	common ninebark,	chokecherry, common		northern red oak,	İ			
	common winterberry	chokecherry, common	nannyherry negan	nin oak tulintree	I I			

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
572A, 572B, 572C2:							
Loran	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak		
614A, 614B:			 				
Chenoa	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood, pin oak		
662B:	<u> </u>	į			į		
Barony	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine 		
663B:	<u> </u>	į			į		
Clare	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum,	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine		

redosier dogwood,

silky dogwood

smooth sumac,

southern arrowwood

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
667B: Kaneville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,		Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		
668B: Somonauk	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		
675B, 675C2: Greenbush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine		
679B: Blackberry	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
680B:							
Campton	American hazelnut,	American plum,	 Washington hawthorn	Douglas fir, Norway	Carolina poplar,		
Camp con	black chokeberry,	American	arborvitae, blue	spruce, black	eastern cottonwood,		
	common elderberry,	witchhazel,	spruce, common	walnut, blackgum,	eastern white pine		
	common juniper,	blackhaw, common	persimmon, eastern	common hackberry,			
	common ninebark,	chokecherry, common		northern red oak,	ì		
	common winterberry,	· -	nannyberry, pecan,	pin oak, tuliptree	Ì		
	coralberry,	prairie crabapple,	white oak	į -	Ì		
	mapleleaf viburnum,	roughleaf dogwood,	į	İ	İ		
	redosier dogwood,	smooth sumac,			İ		
	silky dogwood	southern arrowwood					
712A:	 		 	l	l I		
Spaulding	Common winterberry.	Common pawpaw,	Arborvitae, bur oak,	Carolina poplar.	 		
-F	gray dogwood,	nannyberry,	common hackberry,	eastern cottonwood	İ		
	redosier dogwood	roughleaf dogwood,	eastern redcedar,	į	Ì		
	İ	silky dogwood	green hawthorn	İ	İ		
715A:	 		l I	l I	 		
Arrowsmith	American	Blackhaw, cockspur	Austrian pine,	 Norway spruce,	Carolina poplar,		
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood,		
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak		
	chokeberry, common	serviceberry,	spruce, common	maple, swamp white	į -		
	elderberry, common	prairie crabapple,	persimmon, eastern	oak, sweetgum	İ		
	juniper, common	roughleaf dogwood,	redcedar, green		İ		
	ninebark, common	rusty blackhaw,	hawthorn,		1		
	winterberry,	southern arrowwood,	nannyberry, pecan,				
	northern spicebush,	witchhazel	shingle oak				
	redosier dogwood,						
	silky dogwood						
732A, 732B:	 		 	 	 		
Appleriver	American	Blackhaw, cockspur	Austrian pine,	Norway spruce,	Carolina poplar,		
	cranberrybush,	hawthorn, common	Douglas fir,	blackgum, common	eastern cottonwood,		
	Canada yew, black	pawpaw, common	arborvitae, blue	hackberry, red	pin oak		
	chokeberry, common	serviceberry,	spruce, eastern	maple, swamp white	İ		
	elderberry, common	prairie crabapple,	redcedar, green	oak			
	juniper, common	roughleaf dogwood,	hawthorn,				
	ninebark, common	rusty blackhaw,	nannyberry, pecan,				
	winterberry,	southern arrowwood,	shingle oak		ļ		
	northern spicebush,	witchhazel			!		
	redosier dogwood,						
	silky dogwood						

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	 	rrees naving predic	ted 20-year average h	eignt, in reet, of	
and soil name	<8	8-15	16-25	26-35	>35
791A, 791B: Rush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	 Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine
792A, 792B: Bowes	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	 Carolina poplar, eastern cottonwood, eastern white pine
794G: Marseilles	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	 Black oak, common hackberry, eastern white pine 	 Carolina poplar 	
Northfield	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	 	
Ritchey	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum		 Bur oak, chinkapin oak, thornless honeylocust 	 	

	Trees having predicted 20-year average height, in feet, of							
Map symbol	ļ		1					
and soil name	<8	8-15	16-25	26-35	>35			
802B, 802D:	[
Orthents, loamy	American hazelnut,	American plum,	Washington hawthorn,	Douglas fir, Norway	Carolina poplar,			
	black chokeberry,	American	arborvitae, blue	spruce, black	eastern cottonwood,			
	common elderberry,	witchhazel,	spruce, eastern	walnut, blackgum,	eastern white pine			
	common juniper,	blackhaw, common	redcedar,	common hackberry,	į			
	common ninebark,	chokecherry, common	nannyberry, pecan,	northern red oak,	İ			
	common winterberry,	serviceberry,	white oak	pin oak	İ			
	coralberry,	prairie crabapple,	İ	İ	İ			
	mapleleaf viburnum,	roughleaf dogwood,		İ	İ			
	redosier dogwood,	smooth sumac,		İ	İ			
	silky dogwood	southern arrowwood						
804D, 804G:			 		 			
Orthents, acid	Common juniper	Austrian pine,	Black locust, blue	i	i			
	i	common chokecherry,	spruce, northern	İ	Ì			
	İ	common winterberry,	red oak, thornless	İ	İ			
	İ	eastern redcedar	honeylocust, white	İ	İ			
	į	į	oak	į	į			
805B:	 	 	 		 			
Orthents, clayey	American	American plum,	Arborvitae, black	Norway spruce	Carolina poplar			
	cranberrybush,	American	oak, blackgum, bur					
	American hazelnut,	witchhazel,	oak, chinkapin oak,	i	i			
	black chokeberry,	Washington	common hackberry,	i	i			
	common juniper,	hawthorn, blackhaw,	eastern redcedar	i	ì			
	coralberry, gray	common chokecherry,		ĺ	i			
	1 1 1 1 -1 6	1	1	1	1			

V		Trees having predic	ted 20-year average h	eight, in feet, of	
Map symbol and soil name	 <8	8-15	16-25	26-35	>35
802B, 802D:			 		
Orthents, loamy	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	arborvitae, blue spruce, eastern redcedar,	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
804D, 804G: Orthents, acid	 Common juniper 	Austrian pine, common chokecherry, common winterberry, eastern redcedar	: -	 	
805B: Orthents, clayey	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	 	 Norway spruce 	 Carolina poplar
814A: Muscatune	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
814A: Buckhart	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	prairie crabapple,	arborvitae, blue spruce, common persimmon, eastern	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine		
817A, 817B:		 	 	 			
Channahon	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust 	 	 		
Hesch	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	nannyberry, prairie crabapple, roughleaf dogwood,	white pine 	Carolina poplar 	 		
818A: Flanagan	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak 		

Table 10.--Windbreaks and Environmental Plantings--Continued

	Trees having predicted 20-year average height, in feet, of								
Map symbol									
and soil name	<8	8-15	16-25	26-35	>35				
	!	!							
818A:									
Catlin	American hazelnut,	American plum,	Washington hawthorn,		Carolina poplar,				
	black chokeberry, common elderberry,	American witchhazel,	arborvitae, blue spruce, common	spruce, black walnut, blackgum,	eastern cottonwood eastern white pine				
	common juniper,	blackhaw, common	persimmon, eastern	common hackberry,	eastern white pine				
	common ninebark,	chokecherry, common	· -	northern red oak,	I I				
	common winterberry,	serviceberry,	nannyberry, pecan,	pin oak, tuliptree					
	coralberry,	prairie crabapple,	white oak						
	mapleleaf viburnum,	roughleaf dogwood,	İ	İ	Ì				
	redosier dogwood,	smooth sumac,							
	silky dogwood	southern arrowwood							
820E, 820G: Hennepin	American hazelnut,	 Blackhaw, common	 American sycamore,	 Carolina poplar,	l I				
неттерти	common winterberry,			eastern cottonwood					
	gray dogwood,	pawpaw, nannyberry,	spruce, bur oak,		[]				
	redosier dogwood	roughleaf dogwood,	chinkapin oak,	İ					
	į	silky dogwood	common hackberry,	İ	Ì				
	ļ.	!	eastern redcedar	!	!				
Casco	American	American plum, bur	 Black oak, common	 Carolina poplar	 				
Casco	cranberrybush,	oak, chinkapin oak,		carorina poprar	 				
	American hazelnut,	common	white pine	 	l 				
	black chokeberry,	serviceberry,							
	common chokecherry,	eastern redcedar,		İ	į				
	common elderberry,	nannyberry, prairie							
	common juniper,	crabapple,							
	coralberry,	roughleaf dogwood,							
	mapleleaf viburnum,	smooth sumac	ĺ	 	1				
	silky dogwood	 	 	 	 				
830.	i İ	 		 	l 				
Landfills	İ								
	İ	j		İ	į				
864.									
Pits, quarry									
0.65									
865. Pits, gravel	I I	 	 	 	 				
rics, graver		I I] 	Į I				

Table 10.--Windbreaks and Environmental Plantings--Continued

]	Trees having predic	ted 20-year average h	eight, in feet, of			
Map symbol							
and soil name	<8	8-15	16-25	26-35	>35		
96982 9698.	 	 	 	 	 		
969E2, 969F: Casco	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	oak, chinkapin oak, common serviceberry,	white pine 	 Carolina poplar 	 		
Rodman	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	 Bur oak, chinkapin oak, thornless honeylocust 	 	 		
1103A:]	 	 	 		
Houghton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	hazel alder, nannyberry, roughleaf dogwood	Arborvitae	Pin oak, river birch, swamp white oak	Carolina poplar, eastern cottonwood - - - - - -		
1480A: Moundprairie	 Common winterberry, gray dogwood, redosier dogwood	 Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	 Carolina poplar, eastern cottonwood 	 		

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of							
and soil name	<8	8-15	16-25	26-35	>35			
3073A: Ross	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood pin oak			
3076A: Otter	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	·	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood pin oak 			
3082A: Millington		Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	 Carolina poplar, eastern cottonwood 	 			
3107A: Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	·	 Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	 Carolina poplar, eastern cottonwood pin oak 			

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of						
and soil name	<8	8-15	16-25	26-35	>35		
3321A: Du Page	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	 Carolina poplar, eastern cottonwood, eastern white pine 		
3451A: Lawson	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak			
3480A: Moundprairie	 Common winterberry, gray dogwood, redosier dogwood	 Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	 Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	 Carolina poplar, eastern cottonwood 	 		
3800A: Psamments	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	!	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	 Red maple, river birch, swamp white oak, sweetgum 	 Carolina poplar, eastern cottonwood, pin oak 		

Table	10Windbre	aks and	Environme	ntal Pla	ntings	Continue	d	
	Trees	having	predicted	20-year	average	height,	in	fee

Map symbol	Trees having predicted 20-year average height, in feet, of				
and soil name	<8	8-15	16-25	26-35	>35
7073A, 8073A: Ross	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood,	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak
	ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	rusty blackhaw, southern arrowwood, witchhazel 	hawthorn, nannyberry, pecan, shingle oak 	 	
8107A: Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	·	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8151A: Ridgeville	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	 Norway spruce, blackgum, common hackberry, red maple, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak

Table 10.--Windbreaks and Environmental Plantings--Continued

Map symbol	Trees having predicted 20-year average height, in feet, of							
and soil name	<8	8-15	16-25	26-35	>35			
8404A: Titus	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	'	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	 Carolina poplar, eastern cottonwood, pin oak 			
8451A:	 American	 Blackhaw, cockspur	 Austrian pine,	 Norway spruce,	 			
	cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood,	Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan,	blackgum, common hackberry, red maple, swamp white oak	eastern cottonwood, pin oak 			
8516A: Faxon	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	'	 Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	 Carolina poplar, eastern cottonwood, pin oak			

Table 11.--Forestland Productivity

(Only the soils that are commonly used as forestland are listed. See text for an explanation of terms used in this table)

Man somb 3	100000000000000000000000000000000000000	productivity		
Map symbol and soil name	Common trees	Site index	 Volume of wood fiber	 Suggested trees to plan
	İ		cu ft/ac	
			ļ	
23B:				
Blount	Northern red oak	57	43	Black oak, bur oak,
	White ash	57	43	chinkapin oak,
	Sugar maple	57 54	43 29	common hackberry,
		34	29	eastern redeedar
51A, 61B:	i		i	
	 Northern red oak	70	57	Common hackberry,
-	White oak	70	57	common persimmon,
	Bur oak			eastern cottonwood,
	Green ash			pecan, pin oak,
				swamp white oak
38B, 88D:			 	
	 Northern red oak	70	57	Common hackberry,
	Jack pine		i	eastern redcedar,
	Eastern white pine		i	eastern white
	Red pine			pine, red maple, red red pine, shortleaf
				pine
L03A:			 	
	 - Silver maple	82	29	Eastern cottonwood,
	Quaking aspen	60	57	pin oak, swamp white
	White ash	56	43	oak
	Red maple	56	29	
	Arborvitae	37	57	
	Green ash		ļ	
104A:			 	
	 Silver maple	70	29	Common hackberry,
•	American elm			eastern cottonwood,
	Shagbark hickory			pecan, pin oak,
	į		İ	swamp white oak
LO5A, 105B, 105C2:				
	 	80	57	Black walnut,
Datavia	Northern red oak			eastern white
	Black walnut			pine, northern red
			i	oak, red pine,
	j i		İ	white oak
210.				
l31B: Alvin	 - White oak	80	57	 Black walnut, bur
11T A TIT 2	Northern red oak	80	57	oak, eastern white
	Black walnut			pine, pecan, pin
			İ	oak
121.02				
.31C2:	Northorn red est	9.0	 57	Plack walnut how
WT A TIT	Northern red oak Tuliptree	80 90	86	Black walnut, bur oak, eastern white
	* GT T D CT E E	<i>5</i> U	1 00	Jan, Cabicill Willie
		80	57	
	White oak Black walnut	80	57	pine, pecan, pin oak, tuliptree

Table 11.--Forestland Productivity--Continued

	Potential	productivity		
Map symbol and soil name	Common trees	Site index	 Volume of wood fiber	 Suggested trees to plant
			cu ft/ac	
132A:				
	 White oak	 80	57	 Common hackberry,
2042112	Northern red oak	80	57	eastern cottonwood,
	Black walnut		 	pecan, pin oak, swamp white oak
134A, 134B, 134C2, 134D2:			 	
Camden	Green ash	76	72	Black walnut,
	Northern red oak	85	72	eastern cottonwood,
	Sweetgum	80	86	eastern white
	Tuliptree	95	100	pine, northern red
	White oak 	85 	72 	oak, pecan, pin oak, tuliptree, white oak
134D3, 134F:		İ	İ	İ
Camden	White oak	80	57	Black walnut,
	Northern red oak			eastern cottonwood,
	Tuliptree			eastern white pine,
	Black walnut 		 	northern red oak, pecan, pin oak, tuliptree, white oak
193C2:				
Mayville	Northern red oak	78	57	Black walnut,
	Shagbark hickory			eastern cottonwood,
	Sugar maple			eastern white pine,
	White ash			northern red oak,
	White oak 	78	57 	pecan, pin oak, tuliptree, white oak
210A:				
Lena	Black willow			Eastern cottonwood,
	Red maple			pin oak, swamp white
	Silver maple			oak
	White ash			
219A:]	<u> </u>		
	Northern red oak	80	57	Common hackberry,
	Black walnut			eastern cottonwood,
	Shagbark hickory			pecan, pin oak,
	White oak	80	57	swamp white oak
2200 22002.				
228B, 228C2:	Din ook	 0E	72	 Plack cak bum cak
wabhames	Pin oak White oak	85 75	72 72	Black oak, bur oak, chinkapin oak,
	American sycamore			common hackberry,
	Northern red oak			eastern redcedar
	Shagbark hickory			
233A, 233B, 233C2:				
Birkbeck	White oak	86	72	Black walnut,
	Green ash Northern red oak 		 	eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree,
				white oak

Table 11.--Forestland Productivity--Continued

Man gumbol and	Potential productivity			
Map symbol and soil name	Common trees	Site index	 Volume of wood fiber	Suggested trees to plant
			cu ft/ac	
236A:	 		 	
	White oak	80	57	Common hackberry,
	Black walnut		i	common persimmon,
	Northern red oak	80	57	eastern cottonwood,
	 		l I	pecan, pin oak, swamp white oak
			 	swamp white oak
241F, 241G:			İ	
Chatsworth	Northern red oak	66	57	Austrian pine,
	American basswood			bitternut hickory,
	Shagbark hickory Sugar maple			bur oak, chinkapin oak, common
	White ash			hackberry, eastern
				redcedar, honeylocust
242A:	 			
Kendall	White oak	80	57	Common hackberry,
	Black walnut			common persimmon,
	Northern red oak	80 90	57 86	eastern cottonwood,
	Tuliptree	90	86	pecan, pin oak, swamp white oak
243A, 243B, 243C2:	 			
St. Charles	Northern red oak	85	72	Black walnut,
	Sweetgum			eastern cottonwood,
	Tuliptree	95	100	eastern white pine,
	White oak Green ash	85 	72 	northern red oak, pecan, pin oak,
				tuliptree, white
	į		į	oak
278A, 278B:	 			
-	Northern red oak	70	57	Common hackberry,
	White oak	70	57	common persimmon,
	Bur oak			eastern cottonwood,
	Green ash			pecan, pin oak, swamp white oak
279B:	 			
Rozetta	White oak	80	57	Black walnut,
	Northern red oak	80	57	eastern cottonwood,
	Tuliptree Black walnut	90	86	eastern white pine, northern red oak,
	Black walnut			pecan, pin oak,
			İ	tuliptree, white
			İ	oak
280C2:	 			
Fayette	Northern red oak	80	57	Black walnut,
	White oak	80	57	eastern cottonwood,
	Black walnut Tuliptree	90	86	eastern white pine, northern red oak,
			30	pecan, pin oak,
	j		İ	tuliptree, white
			I.	oak

Table 11.--Forestland Productivity--Continued

	Potential	productivity		
Map symbol and soil name	Common trees	 Site index 	 Volume of wood fiber	Suggested trees to plant
			cu ft/ac	
298B:		 	l I	
	 Northern red oak	 65	57	Black oak, bur oak,
becemen	Black cherry	!		chinkapin oak,
	Bur oak			common hackberry,
	Northern pin oak			eastern redcedar
	Shagbark hickory			
	White oak			
211D.		 		
311B:	 Northern red oak	 50	29	 Bur oak, chinkapin
Ricelley	White oak		29	oak, eastern
	Bur oak			redcedar, thornless
	Eastern redcedar		j	honeylocust
			ļ	
315B:	 Northern red oak	 55	 43	Bur oak, chinkapin
CHaimanon	Sugar maple		43	Bur oak, chinkapin oak, eastern
	White oak	 		redcedar, thornless
	American basswood			honeylocust
		İ	İ	
317A:				
Millsdale	Pin oak	86	72	American sycamore,
	Eastern cottonwood Green ash	 		eastern cottonwood, pin oak, red maple,
	Red maple	<u> </u>	i	swamp white oak
	Swamp white oak			
	Black cherry		i	
			ļ	
320B, 320C2:	 Northern red oak	 70	 57	 Black oak, bur oak,
FIGUREOUT	White oak		57	chinkapin oak,
	Bur oak	,o		common hackberry,
	Green ash		i	eastern redcedar
			[
325B, 325C2:	37 12			
Dresden	Northern red oak American basswood	70 	57 	Black oak, common
	Black cherry	!		hackberry, eastern white pine
	Black oak			white pine
	Shagbark hickory	 		
	Sugar maple		i	
	White ash			
	White oak			
327B, 327C2, 327D2:	1	 	 	
	Northern red oak	65	57	Black oak, common
	Black cherry	!		hackberry, eastern
	Shagbark hickory		i	white pine
	Sugar maple		j	
	White ash		ļ	[
	White oak			
344A:	 	[
	Northern red oak		i	Black walnut,
	Shagbark hickory		i	eastern cottonwood,
	Tuliptree			eastern white pine,
	White oak			northern red oak,
]]	pecan, pin oak, white oak

Table 11.--Forestland Productivity--Continued

Man gambal and	Potential	productivity		
Map symbol and soil name	Common trees	Site index	 Volume of wood fiber	 Suggested trees to plant
			cu ft/ac	
344B:	 		l I	
	 Northern red oak	85	72	Black walnut,
	Shagbark hickory	85	72	eastern cottonwood,
	White ash			eastern white pine,
	White oak			northern red oak,
			i	pecan, pin oak,
	İ		İ	white oak
44C2:				
	 Northern red oak	85	72	 Black walnut,
naivaid	Shagbark hickory		72	eastern cottonwood,
	White ash			eastern white pine,
	White oak	85	72	northern red oak,
		03	/ 2	pecan, pin oak,
	 			tuliptree, white
				oak
97 F:				l
	 Black oak	56	43	Black oak, common
	Eastern redcedar			hackberry, eastern
			İ	white pine, red pine
13B, 413C2:	 		 	
	Northern red oak	66	43	Black oak, common
	White oak	66	29	hackberry, eastern
	White ash			white pine
	Black oak		ļ	
27C2, 527D2:	 		 	
	Northern red oak	69	57	Black walnut,
	American beech			eastern cottonwood,
	Shagbark hickory			eastern white pine,
	Sugar maple			northern red oak,
	White ash			pecan, pin oak,
	White oak		ļ	white oak
30B 530C2, 530C3, 530D2, 530D3, 530E2, 530F:	 		 	
Ozaukee	Northern red oak	66	57	Black oak, bur oak,
	American basswood			chinkapin oak,
	Shagbark hickory			common hackberry,
	Sugar maple			eastern redcedar
	White ash			
49B, 549C2, 549D2, 549F, 549G:	 		 	
Marseilles	Northern red oak	66	43	Black oak, common
	Black oak			hackberry, eastern
	White ash			white pine
	White oak	66	43	
	!		I I	
54B:			1	
	 Northern red oak	80	57	Common hackberry,
	 Northern red oak Black walnut	80	57 	 Common hackberry, eastern cottonwood,
554B: Kernan				:

Table 11.--Forestland Productivity--Continued

	Potential	productivity		
Map symbol and soil name	 Common trees	Site index	 Volume of wood fiber	 Suggested trees to plant
560D2, 560E: St. Clair	 Northern red oak Sugar maple White ash White oak	66 62	cu ft/ac 43 43	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar
662B: Barony	 Northern red oak Shagbark hickory White ash White oak		 72 72 	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak
667B: Kaneville	 Northern red oak Shagbark hickory White ash White oak	85 85	 72 72 	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak
668B: Somonauk	 Northern red oak Shagbark hickory Sugar maple White oak	85 85	72 72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak
675B, 675C2: Greenbush	 White oak Northern red oak Black walnut Tuliptree	80 80 90	 57 57 86 	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak
680B: Campton	 Northern red oak Shagbark hickory Sugar maple White oak		72 72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak
732A, 732B: Appleriver	 White oak	70 	 57 	 Common hackberry, eastern cottonwood, pecan, pin oak, swamp white oak

Table 11.--Forestland Productivity--Continued

Potential	productivity		
 Common trees 	Site index	 Volume of wood fiber	 Suggested trees to plant
		cu ft/ac	
 Northern red oak	90	72	 Black walnut,
'		!	eastern cottonwood,
!			eastern white pine,
Sugar maple			northern red oak,
		i i	pecan, pin oak,
Northorn rod oak	90	72	 Black walnut,
		!	eastern cottonwood,
!		!	eastern white pine,
		!	northern red oak,
			pecan, pin oak, white oak
 Northern red oak	66	43	Black oak, common
Black oak			hackberry, eastern
 White ash			white pine
White oak	66	29	 -
 Northern red oak	50	29	 Bur oak, chinkapin
White oak		29	oak, eastern
Bur oak			redcedar, thornless
Eastern redcedar			honeylocust
 Northern red oak	50	29	Bur oak, chinkapin
White oak	50	29	oak, eastern
Bur oak			redcedar, thornless
Eastern redcedar			honeylocust
Northern red oak	55	43	Bur oak, chinkapin
Sugar maple			oak, eastern
White oak			redcedar, thornless
American basswood			honeylocust
		 -	
		İ	
Northern red oak	85	72	Black walnut,
Shagbark hickory			eastern redcedar,
White oak			eastern white
Black oak 		 	pine, northern red oak, red pine, white oak
 Northern red oak	85	 72	 Black oak, common
Shagbark hickory			hackberry, eastern
White oak			white pine
Black oak			
		İ	
Northern red oak	55	43	Black oak, common
Northern red oak Black oak Shagbark hickory	55 	43	Black oak, common hackberry, eastern
	Northern red oak White oak Shagbark hickory Sugar maple White oak Shagbark hickory White ash White ash White oak Bur oak Eastern redcedar White oak Bur oak Eastern redcedar White oak Bur oak Bur oak Bur oak Bur oak Bur oak Bur oak Bur oak Bur oak Bur oak Bur oak	Northern red oak 90	Northern red oak 90 72

Table 11.--Forestland Productivity--Continued

	Potential	productivity		
Map symbol and soil name	 Common trees 	Site index	 Volume of wood fiber	Suggested trees to plant
			cu ft/ac	
969E2, 969F:			 	
	 Northern red oak	45	29	Bur oak, chinkapin
KOdiliaii	Shagbark hickory		23	oak, eastern
	White oak			redcedar, thornless
				honeylocust
1103A:]	<u> </u>	[[
	Silver maple	82	29	Eastern cottonwood,
	Arborvitae		57	pin oak, swamp
	Green ash			white oak
	Quaking aspen		57	
	Red maple		29	
	White ash	56	43	
480A:			 	
Moundprairie	Eastern cottonwood	86	86	Eastern cottonwood,
=	Green ash		i	pin oak, silver
	Red maple	56	29	maple, swamp white
	Silver maple	82	29	oak
3073A:			 	
Ross	Northern red oak	86	72	Common hackberry,
	Sugar maple	85	57	eastern cottonwood,
	Tuliptree	96	100	pecan, pin oak,
	White ash			swamp white oak
	White oak			
	Black cherry			
	Black walnut		i	
3076A:				
Otter	Silver maple	94	43	Common hackberry,
	White ash			eastern cottonwood,
				pin oak, river
				birch, swamp white
				oak, sweetgum
3082A:				
Millington	American beech		j	Bur oak, common
	American sycamore			hackberry, eastern
	Blackgum			cottonwood,
	Northern red oak			eastern redcedar
	Pin oak			
	Red maple			
	Shagbark hickory			
	Swamp white oak			
	White ash			
	İ		İ	
107A:				Common hackberry,
	Pin oak	90	72	COMMICH HACKDELLY,
	Pin oak American sycamore	90 	72 	eastern cottonwood,
				-
	American sycamore			eastern cottonwood,
Sawmill	American sycamore			eastern cottonwood, pin oak, river birch, swamp white
Sawmill	American sycamore Eastern cottonwood 		 	eastern cottonwood, pin oak, river birch, swamp white oak
Sawmill	American sycamore			eastern cottonwood, pin oak, river birch, swamp white oak Common hackberry,
3 4 51A:	American sycamore Eastern cottonwood Silver maple	70	 29	eastern cottonwood, pin oak, river birch, swamp white oak

Table 11.--Forestland Productivity--Continued

Man nambal and	Potential	productivity	1	
Map symbol and soil name	Common trees	Site index	 Volume of wood fiber	Suggested trees to plant
			cu ft/ac	
480A:			 	
	 Eastern cottonwood	86	 86	Eastern cottonwood,
Modification in the second sec	Green ash	50	29	silver maple
	Green asn	50	29	siiver mapie
073A:				
Ross	Northern red oak	86	72	Black walnut,
	Sugar maple	85	57	eastern cottonwood,
	Tuliptree	96	100	eastern white pine,
	White ash			northern red oak,
	White oak			pecan, pin oak,
	Black cherry			tuliptree, white
	Black walnut			oak
773A: Ross	 Northern red oak	86	 72	Common hackberry,
	Sugar maple		57	eastern cottonwood,
	Tuliptree		100	pecan, pin oak,
	White ash		100	swamp white oak
	White oak		l	swamp will ce Oak
	Black cherry			
	Black walnut			
	į		ĺ	
L07A:				
Sawmill	Pin oak	90	72	Common hackberry,
	Cherrybark oak			eastern cottonwood,
	Eastern cottonwood			pin oak, river
	American sycamore			birch, swamp white
	Sweetgum			oak, sweetgum
L51A:			 	
	Eastern cottonwood	99	129	Common hackberry,
	Silver maple		29	eastern cottonwood,
	White ash		29	pecan, pin oak,
	Red maple			swamp white oak
				oak
104A:		99	 129	Common hackberry,
Titus	Silver maple		29	eastern cottonwood,
	White ash	51	29	pin oak, river
	WHILE ASH	31	29	birch, swamp white
				oak, sweetgum
	į		İ	
451A:				
Lawson	Silver maple	70	29	Common hackberry,
	White ash			eastern cottonwood,
	Red maple			pecan, pin oak,
	 		 	swamp white oak
516A:	, 			
Faxon	Eastern cottonwood	99	129	Common hackberry,
	Silver maple	80	29	eastern cottonwood,
	White ash	51	29	pecan, pin oak,

Table 12.--Forestland Harvest Equipment Considerations

(Only the soils that are commonly used as forestland are listed. See text for a description of the considerations listed in this table)

Map symbol and soil name	Forestland harvest equipment considerations
23B:	Wetness
Blount	Susceptible to rutting and wheel slippage
61A, 61B:	Wetness
Atterberry	Susceptible to rutting and wheel slippage
88B, 88D: Sparta	Poor traction (loose sandy material)
103A:	Wetness
Houghton	Susceptible to rutting and wheel slippage
104A:	Wetness
Virgil	Susceptible to rutting and wheel slippage
105A, 105B, 105C2: Batavia	Susceptible to rutting and wheel slippage
131B, 131C2: Alvin	Susceptible to rutting and wheel slippage
132A:	Wetness
Starks	Susceptible to rutting and wheel slippage
134A, 134B, 134C2: Camden	Susceptible to rutting and wheel slippage
134D2, 134D3, 134F:	Slope
Camden	Susceptible to rutting and wheel slippage
193C2:	Wetness
Mayville	Susceptible to rutting and wheel slippage
210A:	Wetness
Lena	Susceptible to rutting and wheel slippage
219A:	Wetness
Millbrook	Susceptible to rutting and wheel slippage
228B, 228C2:	Wetness
Nappanee	Susceptible to rutting and wheel slippage
233A, 233B, 233C2: Birkbeck	Wetness Susceptible to rutting and wheel slippage
236A:	Wetness
Sabina	Susceptible to rutting and wheel slippage

Table 12.--Forestland Harvest Equipment Considerations--Continued

Map symbol and soil name	Forestland harvest equipment considerations
241F, 241G: Chatsworth	Slope Wetness Susceptible to rutting and wheel slippage
242A: Kendall	Wetness Susceptible to rutting and wheel slippage
243A, 243B, 243C2: St. Charles	Susceptible to rutting and wheel slippage
278A, 278B: Stronghurst	 Wetness Susceptible to rutting and wheel slippage
279B: Rozetta	Susceptible to rutting and wheel slippage
280C2: Fayette	Susceptible to rutting and wheel slippage
298B: Beecher	Wetness Susceptible to rutting and wheel slippage
311B: Ritchey	Susceptible to rutting and wheel slippage
315B: Channahon	Susceptible to rutting and wheel slippage
317A: Millsdale	Wetness Susceptible to rutting and wheel slippage
320B, 320C2: Frankfort	Wetness Susceptible to rutting and wheel slippage
325B, 325C2: Dresden	Susceptible to rutting and wheel slippage
327B, 327C2, 327D2: Fox	Susceptible to rutting and wheel slippage
344A, 344B, 344C2: Harvard	Susceptible to rutting and wheel slippage
397F: Boone	Slope Poor traction (loose sandy material)
413B, 413C2: Gale	Susceptible to rutting and wheel slippage
527C2, 527D2: Kidami	Wetness Susceptible to rutting and wheel slippage

Table 12.--Forestland Harvest Equipment Considerations--Continued

Map symbol and soil name	Forestland harvest equipment considerations
530B, 530C2, 530C3, 530D2, 530D3: Ozaukee	Wetness Susceptible to rutting and wheel slippage
530E2, 530F: Ozaukee	Slope Wetness Susceptible to rutting and wheel slippage
549B, 549C2: Marseilles	Susceptible to rutting and wheel slippage
549D2, 549F, 549G: Marseilles	Slope Susceptible to rutting and wheel slippage
554B: Kernan	Wetness Susceptible to rutting and wheel slippage
560D2: St. Clair	Wetness Susceptible to rutting and wheel slippage
560E: St. Clair	Slope Wetness Susceptible to rutting and wheel slippage
662B: Barony	Susceptible to rutting and wheel slippage
667B: Kaneville	Susceptible to rutting and wheel slippage
668B: Somonauk	Susceptible to rutting and wheel slippage
675B, 675C2: Greenbush	Susceptible to rutting and wheel slippage
680B: Campton	Susceptible to rutting and wheel slippage
732A, 732B: Appleriver	 Wetness Susceptible to rutting and wheel slippage
791A, 791B: Rush	Susceptible to rutting and wheel slippage
792A, 792B: Bowes	Susceptible to rutting and wheel slippage
794G: Marseilles	Slope Susceptible to rutting and wheel slippage
Northfield	Slope Susceptible to rutting and wheel slippage
Ritchey	Slope Susceptible to rutting and wheel slippage

Table 12.--Forestland Harvest Equipment Considerations--Continued

Map symbol and	Forestland harvest equipment considerations
soil name	
817A, 817B: Channahon	
Hesch	No major considerations
820E, 820G: Hennepin	Slope Susceptible to rutting and wheel slippage
Casco	Slope Susceptible to rutting and wheel slippage
969E2, 969F: Casco	Slope Susceptible to rutting and wheel slippage
Rodman	Slope
1103A: Houghton	Wetness Susceptible to rutting and wheel slippage
1480A: Moundprairie	Flooding Wetness Susceptible to rutting and wheel slippage
3073A: Ross	Flooding Susceptible to rutting and wheel slippage
3076A: Otter	Flooding Wetness Susceptible to rutting and wheel slippage
3082A: Millington	Flooding Wetness Susceptible to rutting and wheel slippage
3107A: Sawmill	Flooding Wetness Susceptible to rutting and wheel slippage
3451A: Lawson	Flooding Wetness Susceptible to rutting and wheel slippage
3480A: Moundprairie	Flooding Wetness Susceptible to rutting and wheel slippage
7073A, 8073A: Ross	Susceptible to rutting and wheel slippage
8107A: Sawmill	 Wetness Susceptible to rutting and wheel slippage

Table 12.--Forestland Harvest Equipment Considerations--Continued

Map symbol and	Forestland harvest equipment considerations
soil name	
8151A:	
Ridgeville	Wetness
	Susceptible to rutting and wheel slippage
8404A:	
Titus	Wetness
	Susceptible to rutting and wheel slippage
8451A:	
Lawson	Wetness
	Susceptible to rutting and wheel slippage
8516A:	
Faxon	Wetness
	Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations

(Only the soils that are commonly used as forestland are listed. See text for a description of the considerations listed in this table)

Map symbol and soil name	Forest log landing considerations
SOII Halle	
23B: Blount	Wetness Susceptible to rutting and wheel slippage
61A: Atterberry	Wetness Susceptible to rutting and wheel slippage
61B: Atterberry	Wetness Susceptible to rutting and wheel slippage
88B: Sparta	No major considerations
88D: Sparta	Slope
103A: Houghton	Wetness Susceptible to rutting and wheel slippage
104A: Virgil	Wetness Susceptible to rutting and wheel slippage
105A, 105B: Batavia	Susceptible to rutting and wheel slippage
105C2: Batavia	Slope Susceptible to rutting and wheel slippage
131B: Alvin	Susceptible to rutting and wheel slippage
131C2: Alvin	Slope Susceptible to rutting and wheel slippage
132A: Starks	Wetness Susceptible to rutting and wheel slippage
134A, 134B: Camden	Susceptible to rutting and wheel slippage
134C2, 134D2, 134D3, 134F: Camden	Slope Susceptible to rutting and wheel slippage
193C2: Mayville	Slope Wetness Susceptible to rutting and wheel slippage
210A: Lena	Wetness Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
SOII Hame	
219A: Millbrook	Wetness Susceptible to rutting and wheel slippage
228B, 228C2: Nappanee	Wetness Susceptible to rutting and wheel slippage
233A, 233B: Birkbeck	Wetness Susceptible to rutting and wheel slippage
233C2: Birkbeck	Slope Wetness Susceptible to rutting and wheel slippage
236A: Sabina	 Wetness Susceptible to rutting and wheel slippage
241F, 241G: Chatsworth	Slope Wetness Susceptible to rutting and wheel slippage
242A: Kendall	Wetness Susceptible to rutting and wheel slippage
243A, 243B: St. Charles	Susceptible to rutting and wheel slippage
243C2: St. Charles	Slope Susceptible to rutting and wheel slippage
278A, 278B: Stronghurst	 Wetness Susceptible to rutting and wheel slippage
279B: Rozetta	Susceptible to rutting and wheel slippage
280C2: Fayette	 Slope Susceptible to rutting and wheel slippage
298B: Beecher	Wetness Susceptible to rutting and wheel slippage
311B: Ritchey	Susceptible to rutting and wheel slippage
315B: Channahon	Susceptible to rutting and wheel slippage
317A: Millsdale	 Wetness Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and	Forest log landing considerations
soil name	
320B, 320C2:	
Frankfort	Wetness
	Susceptible to rutting and wheel slippage
325B, 325C2:	
Dresden	Susceptible to rutting and wheel slippage
327B, 327C2:	
Fox	Susceptible to rutting and wheel slippage
327D2:	
Fox	Slope
	Susceptible to rutting and wheel slippage
344A, 344B:	
Harvard	Susceptible to rutting and wheel slippage
344C2:	
Harvard	_
	Susceptible to rutting and wheel slippage
397F:	
Boone	Slope
413B, 413C2:	
Gale	Susceptible to rutting and wheel slippage
527C2:	
Kidami	Wetness
	Susceptible to rutting and wheel slippage
527D2:	
Kidami	Slope
	Wetness
	Susceptible to rutting and wheel slippage
530B, 530C2, 530C3:	
Ozaukee	
	Susceptible to rutting and wheel slippage
530D2, 530D3, 530E2, 530F:	_
Ozaukee	Slope Wetness
	Susceptible to rutting and wheel slippage
549B: Marseilles	Susceptible to rutting and wheel slippage
İ	
549C2, 549D2, 549F, 549G: Marseilles	Slone
Maiseilles	Susceptible to rutting and wheel slippage
	-
554B: Kernan	Wetness
	Susceptible to rutting and wheel slippage
56000 5600	
560D2, 560E: St. Clair	 Slope
	Wetness
ļ	Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
662B: Barony	Susceptible to rutting and wheel slippage
667B: Kaneville	Susceptible to rutting and wheel slippage
668B: Somonauk	Susceptible to rutting and wheel slippage
675B: Greenbush	Susceptible to rutting and wheel slippage
675C2: Greenbush	Slope Susceptible to rutting and wheel slippage
680B: Campton	Susceptible to rutting and wheel slippage
732A, 732B: Appleriver	Wetness Susceptible to rutting and wheel slippage
791A, 791B: Rush	Susceptible to rutting and wheel slippage
792A, 792B: Bowes	Susceptible to rutting and wheel slippage
794G: Marseilles	Slope Susceptible to rutting and wheel slippage
Northfield	Slope Susceptible to rutting and wheel slippage
Ritchey	Slope Susceptible to rutting and wheel slippage
817A, 817B: Channahon	No major considerations
Hesch	No major considerations
820E, 820G: Hennepin	Slope Susceptible to rutting and wheel slippage
Casco	Slope Susceptible to rutting and wheel slippage
969E2, 969F: Casco	Slope Susceptible to rutting and wheel slippage
Rodman	Slope
1103A: Houghton	Wetness Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and	Forest log landing considerations
soil name	
1480A: Moundprairie	Flooding Wetness Susceptible to rutting and wheel slippage
3073A: Ross	Flooding
3076A: Otter	Susceptible to rutting and wheel slippage
3082A: Millington	Flooding Wetness Susceptible to rutting and wheel slippage
3107A: Sawmill	Flooding Wetness Susceptible to rutting and wheel slippage
	Flooding Wetness Susceptible to rutting and wheel slippage
3480A: Moundprairie	Flooding Wetness Susceptible to rutting and wheel slippage
7073A: Ross	Susceptible to rutting and wheel slippage
8073A: Ross	Flooding Susceptible to rutting and wheel slippage
8107A: Sawmill	Flooding Wetness Susceptible to rutting and wheel slippage
8151A: Ridgeville	Flooding Wetness Susceptible to rutting and wheel slippage
8404A: Titus	Flooding Wetness Susceptible to rutting and wheel slippage
8451A: Lawson	Flooding Wetness Susceptible to rutting and wheel slippage

Table 13.--Forest Log Landing Considerations--Continued

Map symbol	Forest log landing				
and	considerations				
soil name					
8516A:					
Faxon	Flooding				
	Wetness				
j	Susceptible to rutting and wheel slippage				
j					

Table 14.--Forestland Site Preparation and Planting Considerations

(Only the soils that are commonly used as forestland are listed. See text for a description of the considerations listed in this table)

Map symbol and soil name	Forestland site preparation and planting considerations
23B: Blount	Wetness Potential poor tilth and compaction
61A, 61B: Atterberry	Wetness Potential poor tilth and compaction
88B: Sparta	No major considerations
88D: Sparta	Water erosion
103A: Houghton	Wetness
104A: Virgil	Wetness Potential poor tilth and compaction
105A, 105B: Batavia	Potential poor tilth and compaction
105C2: Batavia	Water erosion Potential poor tilth and compaction
131B: Alvin	No major considerations
131C2: Alvin	Water erosion
132A: Starks	Wetness Potential poor tilth and compaction
134A, 134B: Camden	Potential poor tilth and compaction
134C2: Camden	Water erosion Potential poor tilth and compaction
134D2, 134D3, 134F: Camden	Slope Water erosion Potential poor tilth and compaction
193C2: Mayville	Wetness Water erosion Potential poor tilth and compaction
210A: Lena	Wetness

Table 14.--Forestland Site Preparation and Planting Considerations--Continued

Map symbol and	 Forestland site preparation and planting considerations
soil name	
219A: Millbrook	 Wetness Potential poor tilth and compaction
228B, 228C2: Nappanee	 Wetness Potential poor tilth and compaction
233A, 233B: Birkbeck	 Wetness Potential poor tilth and compaction
233C2: Birkbeck	 Wetness Water erosion Potential poor tilth and compaction
236A: Sabina	 Wetness Potential poor tilth and compaction
241F, 241G: Chatsworth	 Slope Wetness Water erosion Potential poor tilth and compaction
242A: Kendall	 Wetness Potential poor tilth and compaction
243A, 243B: St. Charles	 Potential poor tilth and compaction
243C2: St. Charles	 Water erosion Potential poor tilth and compaction
278A, 278B: Stronghurst	 Wetness Potential poor tilth and compaction
	 Potential poor tilth and compaction
280C2: Fayette	 Water erosion Potential poor tilth and compaction
298B: Beecher	 Wetness Potential poor tilth and compaction
311B: Ritchey	 Depth to hard bedrock Potential poor tilth and compaction
315B: Channahon	 Depth to hard bedrock

Table 14.--Forestland Site Preparation and Planting Considerations--Continued

Map symbol and soil name	 Forestland site preparation and planting considerations
BOII Hame	<u> </u>
317A: Millsdale	 Wetness
320B, 320C2: Frankfort	 Wetness Potential poor tilth and compaction
325B, 325C2: Dresden	 Potential poor tilth and compaction
327B, 327C2: Fox	Potential poor tilth and compaction
327D2: Fox	 Water erosion Potential poor tilth and compaction
344A, 344B: Harvard	 Potential poor tilth and compaction
344C2: Harvard	 Water erosion Potential poor tilth and compaction
397F: Boone	 Slope Water erosion
413B, 413C2: Gale	 - Potential poor tilth and compaction
527C2: Kidami	 Wetness Potential poor tilth and compaction
527D2: Kidami	 Wetness Water erosion Potential poor tilth and compaction
530B, 530C2, 530C3: Ozaukee	 Wetness Potential poor tilth and compaction
530D2, 530D3: Ozaukee	 Wetness Water erosion Potential poor tilth and compaction
530E2, 530F: Ozaukee	 Slope Wetness Water erosion Potential poor tilth and compaction
549B: Marseilles	 Potential poor tilth and compaction
549C2: Marseilles	 Water erosion Potential poor tilth and compaction

Table 14.--Forestland Site Preparation and Planting Considerations--Continued

Map symbol and soil name	Forestland site preparation and planting considerations
549D2, 549F, 549G: Marseilles	Slope Water erosion Potential poor tilth and compaction
554B: Kernan	Wetness Potential poor tilth and compaction
560D2: St. Clair	Wetness Water erosion Potential poor tilth and compaction
560E: St. Clair	Slope Wetness Water erosion Potential poor tilth and compaction
Ī	Potential poor tilth and compaction
667B: Kaneville	Potential poor tilth and compaction
668B: Somonauk	Potential poor tilth and compaction
675B: Greenbush	No major considerations
675C2: Greenbush	Water erosion Potential poor tilth and compaction
680B: Campton	Potential poor tilth and compaction
732A, 732B: Appleriver	Wetness Potential poor tilth and compaction
791A, 791B: Rush	Potential poor tilth and compaction
792A, 792B: Bowes	Potential poor tilth and compaction
794G: Marseilles	Slope Water erosion Potential poor tilth and compaction
Northfield	Slope Water erosion Potential poor tilth and compaction
Ritchey	Slope Depth to hard bedrock Water erosion Potential poor tilth and compaction

Table 14.--Forestland Site Preparation and Planting Considerations--Continued

Map symbol and soil name	Forestland site preparation and planting considerations
817A, 817B: Channahon	No major considerations
Hesch	No major considerations
820E, 820G: Hennepin	Slope Water erosion Potential poor tilth and compaction
Casco	Slope Water erosion
969E2, 969F: Casco	Slope Water erosion
Rodman	Slope Water erosion
1103A: Houghton	Wetness
1480A: Moundprairie	Flooding Wetness
3073A: Ross	Flooding
3076A: Otter	Flooding Wetness
3082A: Millington	Flooding Wetness
3107A: Sawmill	Flooding Wetness
3451A: Lawson	Flooding Wetness
3480A: Moundprairie	Flooding Wetness
7073A, 8073A:	No major considerations
8107A: Sawmill	Wetness
8151A: Ridgeville	Wetness
8404A:	Wetness

Table 14.--Forestland Site Preparation and Planting Considerations--Continued

Map symbol	Forestland site preparation and planting
and	considerations
soil name	
8451A:	
Lawson	Wetness
i	
8516A:	
Faxon	Wetness
i	

Table 15a.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23B: Blount	 Very limited Depth to saturated zone Slow water movement	 1.00 0.96 	 Somewhat limited Depth to saturated zone Slow water movement	 0.99 0.96 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 0.96 0.12
51A: Muscatune	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone	0.98
60C2: La Rose	 Somewhat limited Slow water movement 	 0.21 	 Somewhat limited Slow water movement	 0.21 	 Very limited Slope Slow water movement	 1.00 0.21
60D2: La Rose	 Somewhat limited Slope Slow water movement	 0.96 0.21 	Somewhat limited Slope Slow water movement	 0.96 0.21	 Very limited Slope Slow water movement	 1.00 0.21
61A: Atterberry	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.94 	 Very limited Depth to saturated zone	1.00
61B: Atterberry	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone	 0.94 	 Very limited Depth to saturated zone Slope	 1.00 0.28
67A: Harpster	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
68A: Sable	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
86B: Osco	 Not limited 		 Not limited 		 Somewhat limited Slope	 0.28
86C2: Osco	 Not limited		 Not limited 		 Very limited Slope	1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87A: Dickinson	 Not limited 		 Not limited 	 	 Not limited 	
87B: Dickinson	 Not limited 		 Not limited 	 	 Somewhat limited Slope	0.28
87C2: Dickinson	 Not limited 		 Not limited 	 	 Very limited Slope	1.00
88B: Sparta	 Somewhat limited Too sandy 	 0.95 	 Somewhat limited Too sandy 	 0.95 	 Somewhat limited Too sandy Slope	 0.95 0.28
88D: Sparta	 Somewhat limited Too sandy Slope	 0.95 0.04	 Somewhat limited Too sandy Slope	 0.95 0.04		 1.00 0.95
91A: Swygert	Somewhat limited Depth to saturated zone Slow water movement	0.98	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.75	Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.96
91B, 91B2: Swygert	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.96 	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.75 	Somewhat limited Depth to saturated zone Slow water movement Slope	 0.98 0.96 0.12
91C2, 91C3: Swygert	 Very limited Slow water movement Depth to saturated zone	 1.00 0.98 	 Very limited Slow water movement Depth to saturated zone	 1.00 0.75	Very limited Slow water movement Depth to saturated zone Slope	 1.00 0.98 0.88
103A: Houghton	 Very limited Depth to saturated zone Organic matter content	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
104A: Virgil	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone	 0.94 	 Very limited Depth to saturated zone	1.00
105A: Batavia	 Not limited	 	 Not limited 	; 	 Not limited 	
105B: Batavia	 Not limited		 Not limited 	 	 Somewhat limited Slope	0.50

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		 Picnic areas 		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105C2: Batavia	 Somewhat limited Slope 	 0.01	 Somewhat limited Slope 	 0.01	 Very limited Slope	 1.00
125A: Selma	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	1.00
131B: Alvin	 Not limited 		 Not limited 		 Somewhat limited Slope	0.28
131C2: Alvin	 Not limited 		 Not limited 		 Very limited Slope	1.00
132A: Starks	 Very limited Depth to saturated zone		 Somewhat limited Depth to saturated zone	 0.94	 Very limited Depth to saturated zone	1.00
134A: Camden	 Not limited		 Not limited		 Not limited	
134B: Camden	 Not limited 		 Not limited 		 Somewhat limited Slope	0.28
134C2: Camden	 Not limited 	 	 Not limited 	 	 Very limited Slope	1.00
134D2, 134D3: Camden	 Somewhat limited Slope 	0.96	 Somewhat limited Slope	 0.96	 Very limited Slope	1.00
134F: Camden	 Very limited Slope	1.00	 Very limited Slope	 1.00	 Very limited Slope	1.00
146A: Elliott	 Very limited Depth to saturated zone Slow water movement	 1.00 0.96	movement	 0.96 0.88	saturated zone	 1.00 0.96
146B, 146B2: Elliott	 Very limited Depth to saturated zone Slow water movement	 1.00 0.96 	 Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.88 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 0.96 0.12

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147B2: Clarence	 Very limited Slow water movement Depth to saturated zone	 1.00 0.98	 Very limited Slow water movement Depth to saturated zone	 1.00 0.75	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 0.98
148A: Proctor	 Not limited 	 	 Not limited 		 Not limited 	
148B: Proctor	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.28
148C2: Proctor	 Not limited 		 Not limited 		 Very limited Slope	1.00
149A: Brenton	 Somewhat limited Depth to saturated zone	 0.98	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone	 0.98
151A: Ridgeville	 Somewhat limited Depth to saturated zone	0.98	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone	 0.98
151B: Ridgeville	 Somewhat limited Depth to saturated zone	0.98	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone Slope	0.98
152A: Drummer	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
154A: Flanagan	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21	saturated zone	 0.75 0.21	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21
171A: Catlin	 Not limited	 	 Not limited 		 Not limited 	
171B, 171B2: Catlin	 Not limited 		 Not limited 		 Somewhat limited Slope	0.12
171C2, 171C3: Catlin	 Not limited 		 Not limited 	 	 Very limited Slope 	 1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
193C2: Mayville	 Somewhat limited Slow water movement	 0.21 	 Somewhat limited Slow water movement	 0.21 	 Very limited Slope Slow water movement	 1.00 0.21
198A: Elburn	 Somewhat limited Depth to saturated zone	 0.98	 Somewhat limited Depth to saturated zone	 0.75	 Somewhat limited Depth to saturated zone	 0.98
199A: Plano	 Not limited 	 	 Not limited 		 Not limited 	
199B: Plano	 Not limited	 	 Not limited		 Somewhat limited Slope	0.28
199C2: Plano	 Not limited 	 	 Not limited 	 	 Very limited Slope 	1.00
206A: Thorp	Very limited Depth to saturated zone Ponding Slow water movement	 1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Slow water movement	 1.00 1.00 0.96	saturated zone Ponding	 1.00 1.00 0.96
210A: Lena	 Very limited Depth to saturated zone Ponding	1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
219A: Millbrook	 Very limited Depth to saturated zone	1.00	 Somewhat limited Depth to saturated zone	 0.94	 Very limited Depth to saturated zone	1.00
223B, 223B2: Varna	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.12
223C2, 223C3: Varna	 Somewhat limited Slow water movement	 0.96	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.88
223D2, 223D3: Varna	 Somewhat limited Slow water movement Slope	 0.96 0.04	 Somewhat limited Slow water movement Slope	 0.96 0.04	 Very limited Slope Slow water movement	 1.00 0.96

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		 Picnic areas 		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
228B:						
Nappanee	 Verv limited		 Very limited		 Very limited	i
	Depth to	1.00	: -	1.00	: -	1.00
	saturated zone	į	movement	į	saturated zone	İ
	Slow water	1.00	Depth to	0.94	Slow water	1.00
	movement		saturated zone		movement Slope	 0.12
228C2, 228C3:	 -	į	 -	į	- 	į
Nappanee	 Verv limited		 Very limited	İ	 Very limited	
парранов	Depth to	1.00	: -	1.00	: -	1.00
	saturated zone		movement		saturated zone	i
	Slow water	1.00	Depth to	0.94	Slow water	1.00
	movement		saturated zone		movement	
	 		 		Slope 	0.88
232A:	 -	į	 -	į	 -	
Ashkum	Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone		saturated zone	1
	Ponding	1.00	Ponding	1.00	!	1.00
	Slow water	0.21	Slow water	0.21	Slow water	0.21
	movement	İ	movement	İ	movement	İ
233A:						
Birkbeck	Not limited 		Not limited 		Not limited 	
233B:						
Birkbeck	NOT limited		Not limited 		Somewhat limited Slope	0.28
233C2:	 		 		 	
Birkbeck	Not limited	i	Not limited	į	 Very limited	i
	 		 		Slope	1.00
234A:						
Sunbury	:		Somewhat limited	0.94	Very limited	11 00
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Slow water	0.21	Slow water	0.21	Slow water	0.21
	movement		movement		movement	
235A:	 		 		 	
Bryce	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00		1.00
	saturated zone	1 00	saturated zone	1 00	saturated zone	1 00
	Too clayey Ponding	1.00 1.00	Too clayey Ponding	1.00		1.00
	Slow water	0.96	Slow water	0.96		0.96
	movement		movement		movement	
236A:	 		 		 	
Sabina	:		Somewhat limited	:	Very limited	1
	Depth to	1.00	Depth to	0.94	Depth to	1.00
	saturated zone		saturated zone		saturated zone	0.21
	Slow water movement	0.21	Slow water movement	0.21	Slow water movement	U.ZI
	movement		movement		movement	

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		ļ				
238A:		1				1
Rantoul	· -	1 00	Very limited	1 00	Very limited	11 00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water	1.00	Slow water	1.00	Slow water	1.00
	movement	1	movement	1	movement	1
	Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	İ	İ	ĺ	İ	ĺ	İ
241C3:		ļ				1
Chatsworth	· -		Very limited		Very limited	
	Slow water	1.00	Slow water	1.00	Slow water	1.00
	movement		movement		movement	
	Too clayey	1.00 0.16	Too clayey	1.00	Too clayey	1.00
	Depth to saturated zone	10.10	Depth to saturated zone	10.00	Slope Depth to	0.16
	Saturated Zone	1	saturated zone		saturated zone	0.10
		i		i		i
241D3:	j	İ	j	j	j	İ
Chatsworth	Very limited		Very limited		Very limited	
	Slow water	1.00	Slow water	1.00	Slope	1.00
	movement		movement		Slow water	1.00
	Too clayey	1.00	Too clayey	1.00	movement	
	Depth to	0.16	Depth to	0.08	Too clayey	1.00
	saturated zone		saturated zone		Depth to	0.16
	Slope	0.04	Slope	0.04	saturated zone	
241E3:		i		i		i
Chatsworth	Very limited	į	Very limited	İ	Very limited	į
	Slow water	1.00	Slow water	1.00	Slope	1.00
	movement		movement		Slow water	1.00
	Slope	1.00	Slope	1.00	movement	
	Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
	Depth to	0.16	Depth to	0.08	Depth to	0.16
	saturated zone		saturated zone		saturated zone	
241F, 241G:	 	i	 	i		1
Chatsworth	Very limited	i	 Very limited	i	 Very limited	i
	Slope	1.00	Slope	1.00	Slope	1.00
	Slow water	1.00	Slow water	1.00	Slow water	1.00
	movement		movement		movement	
	Depth to	0.16	Depth to	0.08	Depth to	0.16
	saturated zone		saturated zone		saturated zone	
242A:	 		 		 	1
Kendall	 Verv limited	1		i	 Very limited	1
	Depth to	1.00		0.94	:	1.00
	saturated zone	i	saturated zone	j	saturated zone	i
		1	[1
243A:		ļ				
St. Charles	Not limited		Not limited		Not limited	
243B:			! 			
St. Charles	Not limited	i	Not limited	i	Somewhat limited	i
	į	İ	į	į	Slope	0.28
						1
243C2:						
St. Charles	Not limited		Not limited		Very limited	
					Slope	1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244A: Hartsburg	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
278A: Stronghurst	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone	 0.94 	 - Very limited Depth to saturated zone	1.00
278B: Stronghurst	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone	 0.94 	 Very limited Depth to saturated zone Slope	1.00
279B: Rozetta	 Not limited 		 Not limited 	 	 Somewhat limited Slope	0.28
280C2: Fayette	 Not limited 		 Not limited 	 	 Very limited Slope	1.00
290A: Warsaw	 Not limited 		 Not limited 	 	 Not limited 	
290B: Warsaw	 Not limited 		 Not limited 	 	 Somewhat limited Slope 	 0.12
290C2: Warsaw	 Not limited 		 Not limited 	 	 Somewhat limited Slope	0.88
293A: Andres		 0.99 0.21	 Somewhat limited Depth to saturated zone Slow water movement	 0.78 0.21	 Somewhat limited Depth to saturated zone Slow water movement	 0.99 0.21
293B: Andres	 Somewhat limited Depth to saturated zone Slow water movement	 0.99 0.21	saturated zone	 0.78 0.21	saturated zone	 0.99 0.28 0.21
294B: Symerton	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.28
294C2: Symerton	 Somewhat limited Slow water movement 	 0.21 	 Somewhat limited Slow water movement 	 0.21 	 Very limited Slope Slow water movement	 1.00 0.21

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		 Picnic areas 		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
295A: Mokena	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.96	movement	 0.96 0.75	saturated zone	 0.98 0.96
295B: Mokena	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.96 	 Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.75 	saturated zone	 0.98 0.96 0.12
298B: Beecher	 Very limited Depth to saturated zone Slow water movement	 1.00 0.96 	 Very limited Depth to saturated zone Slow water movement	 1.00 0.96 	saturated zone	 1.00 0.96 0.12
311B: Ritchey	 Very limited Depth to bedrock 	1	 Very limited Depth to bedrock 	1	 Very limited Depth to bedrock Slope	 1.00 0.12
314A: Joliet	 Very limited Depth to saturated zone Depth to bedrock Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Depth to bedrock Ponding	1.00	saturated zone Depth to bedrock	 1.00 1.00 1.00
315B: Channahon	 Very limited Depth to bedrock 		 Very limited Depth to bedrock 		 Very limited Depth to bedrock Slope	 1.00 0.12
317A: Millsdale	 Very limited Depth to saturated zone Ponding Slow water movement	 1.00 1.00 0.21	saturated zone Ponding	 1.00 1.00 0.21	saturated zone Ponding	 1.00 1.00 0.21
318B: Lorenzo	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	 0.12
318C2: Lorenzo	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.88

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		 Picnic areas 		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
320B: Frankfort	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Slow water movement Depth to saturated zone	 1.00 0.94 	saturated zone	 1.00 1.00 0.12
320C2: Frankfort	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00 	 Very limited Slow water movement Depth to saturated zone	 1.00 0.94 	saturated zone	 1.00 1.00 0.88
325B: Dresden	 Not limited 	 	 Not limited 		 Somewhat limited Slope	0.12
325C2: Dresden	 Not limited 	 	 Not limited 		 Somewhat limited Slope	0.88
327B: Fox	 Not limited 	 	 Not limited 		 Somewhat limited Slope 	0.12
327C2: Fox	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	0.88
327D2: Fox	 Somewhat limited Slope 	 0.04	 Somewhat limited Slope	0.04	 Very limited Slope 	1.00
330A: Peotone	Very limited Depth to saturated zone Ponding Slow water movement	 1.00 1.00 0.21	saturated zone	 1.00 1.00 0.21	saturated zone	 1.00 1.00 0.21
344A: Harvard	 Not limited 	 	 Not limited 	 	 Not limited 	
344B: Harvard	 Not limited 	 	 Not limited 		 Somewhat limited Slope 	 0.28
344C2: Harvard	 Not limited 	 	 Not limited 		 Very limited Slope 	 1.00
356A: Elpaso	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
375A: Rutland	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21	saturated zone	 0.75 0.21	saturated zone	 0.98 0.21
375B: Rutland	Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21 	Somewhat limited Depth to saturated zone Slow water movement	 0.75 0.21 	saturated zone	 0.98 0.28 0.21
375B2: Rutland	Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.43 	Somewhat limited Depth to saturated zone Slow water movement	0.75	saturated zone	 0.98 0.43 0.28
388B: Wenona	 Somewhat limited Slow water movement	0.43	 Somewhat limited Slow water movement	 0.43 	Somewhat limited Slow water movement Slope	0.43
388B2: Wenona	 Somewhat limited Slow water movement	 0.21 	 Somewhat limited Slow water movement	 0.21 	Somewhat limited Slope Slow water movement	 0.28 0.21
388C2: Wenona	 Somewhat limited Slow water movement	 0.21 	 Somewhat limited Slow water movement	 0.21 	 Very limited Slope Slow water movement	 1.00 0.21
397F: Boone	 Very limited Slope Too sandy 	 1.00 0.50		 1.00 0.50 		 1.00 0.95 0.50
413B: Gale	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope Depth to bedrock	 0.12 0.03
413C2: Gale	 Not limited 		 Not limited 	 	 Somewhat limited Slope Depth to bedrock	 0.88 0.01

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
435A: Streator	 Very limited	 	 Very limited	 	 Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding Slow water movement	1.00 0.21 	Ponding Slow water movement	1.00 0.21 	Ponding Slow water movement	1.00
448B:			 		 	
Mona	Somewhat limited Slow water movement	0.96	Somewhat limited Slow water movement	 0.96 	Somewhat limited Slow water movement Slope	0.96
44000						
448C2: Mona	Very limited Slow water movement	1.00	 Very limited Slow water movement	 1.00 	 Very limited Slow water movement Slope	 1.00 1.00
					blope	
512B: Danabrook	Not limited		 Not limited 	 	 Somewhat limited Slope	 0.28
512C2: Danabrook	Not limited		 Not limited 	 	 Very limited Slope	1.00
516A: Faxon	Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
527C2: Kidami	Not limited		 Not limited 	 	 Somewhat limited Slope	 0.88
527D2: Kidami	Somewhat limited Slow water movement Slope	 0.21 0.04	 Somewhat limited Slow water movement Slope	 0.21 0.04	 Very limited Slope Slow water movement	 1.00 0.21
F30D		į		į	 -	į
530B: Ozaukee	Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.12
530C2: Ozaukee	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.16	 Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.08	 Somewhat limited Slow water movement Slope Depth to	 0.96 0.88 0.16

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas		 Picnic areas 		 Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
530C3: Ozaukee	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.88
530D2: Ozaukee	 Somewhat limited Slow water movement Depth to saturated zone Slope	 0.96 0.16 0.04	Somewhat limited Slow water movement Depth to saturated zone Slope	 0.96 0.08 0.04	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.16
530D3: Ozaukee	Somewhat limited Slow water movement Depth to saturated zone Slope	0.96	Somewhat limited Slow water movement Depth to saturated zone Slope	 0.96 0.19 0.04	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.39
530E2: Ozaukee	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.16	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.08	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.16
530F: Ozaukee	 Very limited Slope Slow water movement	 1.00 0.96	 Very limited Slope Slow water movement	 1.00 0.96	 Very limited Slope Slow water movement	 1.00 0.96
541B: Graymont	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.28
541B2: Graymont	 Somewhat limited Slow water movement 	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	 0.96 0.50
541C2: Graymont	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement	 0.96 	 Very limited Slope Slow water movement	 1.00 0.96
542A: Rooks	Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21 	Somewhat limited Depth to saturated zone Slow water movement	 0.75 0.21 	Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542B: Rooks	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21	 Somewhat limited Depth to saturated zone Slow water movement	 0.75 0.21 	Somewhat limited Depth to saturated zone Slope Slow water movement	 0.98 0.28 0.21
549B: Marseilles	 Somewhat limited Slow water movement	0.96	 Somewhat limited Slow water movement	 0.96 	 Somewhat limited Slow water movement Slope	0.96
549C2: Marseilles	 Somewhat limited Slow water movement 	 0.96 	 Somewhat limited Slow water movement 	 0.96 	 Very limited Slope Slow water movement Depth to bedrock	 1.00 0.96 0.80
549D2: Marseilles	 Somewhat limited Slow water movement Slope 	 0.96 0.96	movement	 0.96 0.96	 Very limited Slope Slow water movement Depth to bedrock	 1.00 0.96 0.71
549F, 549G: Marseilles	 Very limited Slope Slow water movement	 1.00 0.96 	 Very limited Slope Slow water movement	 1.00 0.96 	 Very limited Slope Slow water movement Depth to bedrock	 1.00 0.96 0.10
554B: Kernan	 Very limited Depth to saturated zone Slow water movement	1.00	 Somewhat limited Depth to saturated zone Slow water movement	0.94	saturated zone	 1.00 0.43 0.12
560D2: St. Clair	 Very limited Slow water movement Slope	1.00	 Very limited Slow water movement Slope	 1.00 0.04	 Very limited Slope Slow water movement	 1.00 1.00
560E: St. Clair	 Very limited Slow water movement Slope Depth to saturated zone	 1.00 1.00 0.16	 Very limited Slow water movement Slope Depth to saturated zone	 1.00 1.00 0.08	 Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00 0.16
567B: Elkhart	 Not limited 	 	 Not limited 		 Somewhat limited Slope	 0.12

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
572A: Loran	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone	 0.98
572B: Loran	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.75 	Somewhat limited Depth to saturated zone Slope	0.98
572C2: Loran	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.75 	 Very limited Slope Depth to saturated zone	 1.00 0.98
614A: Chenoa	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.96	 Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.75	saturated zone	 0.98 0.96
614B: Chenoa	 Somewhat limited Depth to saturated zone Slow water movement	 0.98 0.21	saturated zone	 0.75 0.21	saturated zone	 0.98 0.28 0.21
662B: Barony	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.28
663B: Clare	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.50
667B: Kaneville	 Not limited 	 	 Not limited 	; 	 Somewhat limited Slope	0.28
668B: Somonauk	 Not limited 	 	 Not limited 	; 	 Somewhat limited Slope	0.28
675B: Greenbush	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.28
675C2: Greenbush	 Not limited 	 	 Not limited 		 Very limited Slope	1.00
679B: Blackberry	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.28

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas		 Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
680B: Campton	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	 0.28
712A: Spaulding	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
715A: Arrowsmith	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.75 	 Somewhat limited Depth to saturated zone	 0.98
732A: Appleriver	Somewhat limited Slow water movement Depth to saturated zone	 0.99 0.98	Somewhat limited Slow water movement Depth to saturated zone	 0.99 0.75 	movement	 0.99 0.98
732B: Appleriver	Somewhat limited Slow water movement Depth to saturated zone	 0.99 0.98 	Somewhat limited Slow water movement Depth to saturated zone	 0.99 0.75 	Somewhat limited Slow water movement Depth to saturated zone Slope	 0.99 0.98 0.28
791A: Rush	 Not limited 	 	 Not limited 	 	 Not limited 	
791B: Rush	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.12
792A: Bowes	 Not limited 	 	 Not limited 	 	 Not limited 	
792B: Bowes	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	 0.12
794G: Marseilles	 Very limited Slope Slow water movement	 1.00 0.96 	 Very limited Slope Slow water movement	 1.00 0.96 	 Very limited Slope Slow water movement Depth to bedrock	 1.00 0.96 0.10
Northfield	 Very limited Slope Depth to bedrock	1.00	 Very limited Slope Depth to bedrock	1.00	 Very limited Slope Depth to bedrock	 1.00 1.00
Ritchey	 Very limited Slope Depth to bedrock	1.00	 Very limited Slope Depth to bedrock	1.00	 Very limited Slope Depth to bedrock	 1.00 1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		 Picnic areas 		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802B: Orthents, loamy	 Somewhat limited Slow water movement	 0.21 	 Somewhat limited Slow water movement	 0.21 	 Somewhat limited Slope Slow water movement	 0.28 0.21
802D: Orthents, loamy	 Somewhat limited Slow water movement Slope	 0.21 0.04	 Somewhat limited Slow water movement Slope	 0.21 0.04	Slow water	 1.00 0.21
804D: Orthents, acid	 Very limited Too clayey Slow water movement Slope	 1.00 0.98 0.01	 Very limited Too clayey Slow water movement Slope	 1.00 0.98 0.01	Too clayey	 1.00 1.00 0.98
804G: Orthents, acid	 Very limited Slope Too clayey Slow water movement	 1.00 1.00 0.98	 Very limited Slope Too clayey Slow water movement	 1.00 1.00 0.98	 Very limited Slope Too clayey Slow water movement	 1.00 1.00 0.98
805B: Orthents, clayey	 Very limited Slow water movement Too clayey	 1.00 1.00	 Very limited Slow water movement Too clayey	 1.00 1.00	Very limited Slow water movement Too clayey Slope	 1.00 1.00 0.12
814A: Muscatune	 Somewhat limited Depth to saturated zone	 0.98	 Somewhat limited Depth to saturated zone	 0.75	 Somewhat limited Depth to saturated zone	 0.98
Buckhart	 Not limited	 	 Not limited	 	 Not limited	
817A: Channahon	 - Very limited Depth to bedrock	1	 Very limited Depth to bedrock	 1.00	 Very limited Depth to bedrock	1.00
Hesch	 Not limited 	 	 Not limited 	 	 Not limited 	
817B: Channahon	: -	1	 Very limited Depth to bedrock 	1	 Very limited Depth to bedrock Slope	 1.00 0.50
Hesch	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to bedrock Slope	 0.95 0.50
818A: Flanagan	 Somewhat limited Depth to saturated zone	 0.98	 Somewhat limited Depth to saturated zone	 0.75	 Somewhat limited Depth to saturated zone	 0.98
Catlin	 Not limited 	 	 Not limited 	 	 Not limited 	

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						1
820E, 820G: Hennepin	 Town limited		 Town limited		 Very limited	
неппертп	Slope	1.00	Very limited Slope	1.00	: -	1.00
	Slow water	0.21	Slow water	0.21	Slow water	0.21
	movement		movement		movement	
Casco	 Verv limited		 Very limited		 Very limited	
	Slope	1.00		1.00		1.00
830:	 				 	
Landfills	Not rated	į	Not rated	į	Not rated	į
864:						
Pits, quarry	Not rated 		Not rated 		Not rated 	
865:						į
Pits, gravel	Not rated 		Not rated 		Not rated 	
969E2, 969F:		į		į		į
Casco	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
	Slope		Blobe		Siope	
Rodman	Very limited		Very limited	İ	Very limited	Ì
	Slope	1.00	_	1.00	· -	1.00
	Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
1103A:	İ				İ	i
Houghton	:		Very limited	:	Very limited	
	Depth to	1.00		1.00		1.00
	saturated zone Ponding	1.00	Depth to saturated zone	1.00	saturated zone Organic matter	1.00
			Buculated Ione		content	
1480A:	 				 	
Moundprairie	Very limited	İ	Very limited	İ	 Very limited	j
	Depth to	1.00	Ponding	1.00	Depth to	1.00
	saturated zone		Depth to	1.00	!	
	Flooding	1.00	!		Flooding	1.00
	Ponding 	1.00	Flooding 	0.40	Ponding 	1.00
3073A:						1
Ross	Very limited Flooding	1.00	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
3076A:						
Otter	Very limited Depth to	1.00	Very limited	1.00	Very limited	1.00
	saturated zone		Ponding Depth to	1.00	Depth to saturated zone	1
	Flooding	1.00	saturated zone		Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3082A:	 		[1
Millington	:		Very limited	:	Very limited	į
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding Ponding	1.00	Ponding Flooding	1.00	Flooding Ponding	1.00

Table 15a.--Recreational Development--Continued

Map symbol and soil name	 Camp areas 		Picnic areas		 Playgrounds 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21052						
3107A: Sawmill	 Very limited		 Very limited		 Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone	į	saturated zone	į	saturated zone	İ
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3321A:	 		 		 	
Du Page	 Very limited	i	Somewhat limited	i	 Very limited	i
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3451A:	 		 		 	
Lawson	 Very limited		 Somewhat limited		 Very limited	1
	Flooding	1.00	Depth to	0.75	Flooding	1.00
	Depth to	0.98	saturated zone	İ	Depth to	0.98
	saturated zone		Flooding	0.40	saturated zone	
3480A:	 		 		 	
Moundprairie	 Very limited	i	 Very limited	i	 Very limited	i
-	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3800A:	 	1	 		 	
Psamments	Very limited	Ì	Very limited	Ì	Very limited	ĺ
	Flooding	1.00	Too sandy	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Flooding	1.00
7073A:		i				
Ross	Very limited		Not limited		Not limited	
	Flooding	1.00				
8073A:	 		 	i i	 	
Ross	 Very limited	i	Not limited	i	Somewhat limited	i
	Flooding	1.00		!	Flooding	0.60
8107A:	 		 		 	
	 Very limited	i	 Very limited		 Very limited	i
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	 		Flooding	0.60
8151A:	 	1	 		 	
Ridgeville	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to	0.75	Depth to	0.98
	Depth to	0.98	saturated zone		saturated zone	
	saturated zone		 		Flooding	0.60
8404A:			į			
Titus	Very limited	ļ	Very limited	1	Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone	1.00	saturated zone	1 00	saturated zone	11 00
	Flooding Ponding	1.00	Ponding Slow water	1.00	Ponding Slow water	1.00
	Ponding Slow water	0.96	movement		movement	
	movement			i	Flooding	0.60
	İ	İ	İ	İ	į	İ

Table 15a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	<u> </u>	limiting features	<u> </u>
8451A:	1				 	
Lawson	Very limited		Somewhat limited	İ	Somewhat limited	ĺ
	Flooding	1.00	Depth to	0.75	Depth to	0.98
	Depth to	0.98	saturated zone		saturated zone	
	saturated zone				Flooding	0.60
8516A:			 		 	
Faxon	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60

Table 15b.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways 	
	Rating class and limiting features	Value	Rating class and limiting features		 Rating class and limiting features	Value
23B: Blount		 0.98 	 Somewhat limited Depth to saturated zone	 0.98 	 Somewhat limited Depth to saturated zone	 0.99
51A: Muscatune	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	0.75
60C2: La Rose	 Not limited		 Not limited		 Not limited	
60D2: La Rose	 Not limited 	 	 Not limited 		 Somewhat limited Slope	 0.96
61A, 61B: Atterberry		 0.86	 Somewhat limited Depth to saturated zone	 0.86	 Somewhat limited Depth to saturated zone	0.94
67A: Harpster	Depth to saturated zone	:	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	1.00
68A: Sable	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
86B, 86C2:	 Not limited	 	 Not limited	 	 Not limited	
87A, 87B, 87C2: Dickinson	 Not limited	 	 Not limited	 	 Not limited	
88B: Sparta	 Somewhat limited Too sandy	 0.95	 Somewhat limited Too sandy	 0.95	 Somewhat limited Droughty	0.08
88D: Sparta	 Somewhat limited Too sandy 	 0.95	 Somewhat limited Too sandy 	 0.95	 Somewhat limited Droughty Slope	0.07
91A, 91B, 91B2, 91C2, 91C3: Swygert	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		 Golf fairways 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103A: Houghton	Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
104A: Virgil	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94
105A, 105B: Batavia	 Not limited 	 	 Not limited 	 	 Not limited 	
105C2: Batavia	 Not limited 	 	 Not limited	 	 Somewhat limited Slope	0.01
125A: Selma	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
131B, 131C2: Alvin	 Not limited	 	 Not limited		 Not limited	
132A: Starks	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86	 Somewhat limited Depth to saturated zone	 0.94
134A, 134B, 134C2: Camden	 Not limited	 	 Not limited		 Not limited	
134D2, 134D3: Camden	· -	 1.00	 Very limited Water erosion	 1.00	 Somewhat limited Slope 	 0.96
134F: Camden	 Very limited Water erosion Slope	 1.00 1.00	 Very limited Water erosion Slope	 - 1.00 0.01	 Very limited Slope 	 1.00
146A, 146B, 146B2: Elliott	 Somewhat limited Depth to saturated zone	 0.73 	 Somewhat limited Depth to saturated zone	 0.73 	 Somewhat limited Depth to saturated zone	 0.88
147B2: Clarence	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone Droughty	 0.75 0.01
148A, 148B, 148B2: Proctor	 Not limited 	 	 Not limited 	 	 Not limited 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		 Golf fairways 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149A: Brenton	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
151A, 151B: Ridgeville	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
152A: Drummer	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
154A: Flanagan	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
171A, 171B, 171B2, 171C2, 171C3: Catlin	 Not limited 	 	 Not limited	 	 Not limited	
193C2: Mayville	 Not limited		 Not limited		 Not limited	
198A: Elburn	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
199A, 199B, 199C2: Plano	 Not limited		 Not limited		 Not limited	į Į
206A: Thorp	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
210A: Lena	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	1.00
219A: Millbrook	 Somewhat limited Depth to saturated zone	:	 Somewhat limited Depth to saturated zone	:	 Somewhat limited Depth to saturated zone	 0.94
223B, 223B2, 223C2, 223C3: Varna	 Not limited	 	 Not limited	 	 Not limited	
223D2: Varna	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	 0.04

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223D3: Varna	 Very limited Water erosion 	 1.00 	 Very limited Water erosion 	 1.00 	 Somewhat limited Slope Content of large stones	 0.04 0.01
228B: Nappanee	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94
228C2: Nappanee	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone Droughty	0.94
228C3: Nappanee	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone Droughty	0.94
232A: Ashkum	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	1.00
233A, 233B, 233C2: Birkbeck	 Not limited		 Not limited		 Not limited	
234A: Sunbury	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94
235A: Bryce	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	saturated zone	 1.00 1.00 1.00	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00
236A: Sabina	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94
238A: Rantoul	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00

Table 15b.--Recreational Development--Continued

Map symbol and soil name	 Paths and trail 	s	 Off-road motorcycle trai	ls	 Golf fairways 	
	Rating class and	Value		Value	Rating class and limiting features	Value
0.41.02	limiting features		limiting features		limiting reatures	<u> </u>
241C3: Chatsworth	 Very limited Too clayey 	 1.00 	 Very limited Too clayey 	 1.00 	 Very limited Too clayey Droughty Depth to saturated zone	 1.00 0.97 0.08
241D3: Chatsworth	 Very limited Too clayey 	 1.00 	 Very limited Too clayey 	 1.00 	 Very limited Too clayey Droughty Depth to saturated zone Slope	 1.00 0.99 0.08 0.04
241E3: Chatsworth	 Very limited Too clayey Slope 	 1.00 0.02 	 Very limited Too clayey 	 1.00 	 Very limited Slope Too clayey Droughty Depth to saturated zone	 1.00 1.00 0.90 0.08
241F: Chatsworth	 Very limited Slope 	 1.00 	 Not limited 	 	 Very limited Slope Droughty Depth to saturated zone	 1.00 0.86 0.08
241G: Chatsworth	 Very limited Slope 	 1.00 	 Very limited Slope 	 1.00 	 Very limited Slope Droughty Depth to saturated zone	 1.00 0.84 0.08
242A: Kendall	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94
243A, 243B, 243C2: St. Charles	 Not limited		 Not limited		 Not limited	
244A: Hartsburg	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	1.00
278A, 278B: Stronghurst	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	0.94
279B: Rozetta	 Not limited	 	 Not limited 	 	 Not limited 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	Off-road motorcycle trai	Off-road motorcycle trails		Golf fairways 	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280C2: Fayette	 Not limited 	 	 Not limited 	 	 Not limited 	
290A, 290B, 290C2: Warsaw	 Not limited		 Not limited	 	 Not limited	
293A, 293B: Andres	 Somewhat limited Depth to saturated zone	!	 Somewhat limited Depth to saturated zone	!	 Somewhat limited Depth to saturated zone	0.78
294B, 294C2: Symerton	 Not limited 	 	 Not limited 	 	 Not limited 	
295A, 295B: Mokena	!	!	 Somewhat limited Depth to saturated zone		 Somewhat limited Depth to saturated zone	0.75
298B: Beecher	· -	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
311B: Ritchey	 Not limited 	 	 Not limited 	 	 Very limited Depth to bedrock Droughty	 1.00 0.23
314A: Joliet		 1.00 1.00	saturated zone	 1.00 1.00	Depth to	1.00
315B: Channahon	 Not limited - 	 	 Not limited 	 	 Very limited Depth to bedrock Droughty	 1.00 0.12
317A: Millsdale	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	1.00	 Very limited Depth to saturated zone Ponding Depth to bedrock	 1.00 1.00 0.06
318B: Lorenzo	 - Not limited -	 	 - Not limited -	 	 Somewhat limited Droughty	0.01
318C2: Lorenzo	 Not limited 	 	 Not limited 	 	 Somewhat limited Droughty 	 0.09
320B, 320C2: Frankfort	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.86 	 Somewhat limited Depth to saturated zone	 0.94

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
325B, 325C2: Dresden	 Not limited 	 	 Not limited 	 	 Not limited 	
327B, 327C2: Fox	 Not limited	 	 Not limited	 	 Not limited	
327D2: Fox	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.04
330A: Peotone	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
344A, 344B, 344C2: Harvard	 Not limited 	 	 Not limited 	 	 Not limited 	
356A: Elpaso	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00
375A, 375B, 375B2: Rutland	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
388B, 388B2, 388C2: Wenona	 Not limited	 	 Not limited 	 	 Not limited	
397F: Boone	 Very limited Slope Too sandy	 1.00 0.50 	 Somewhat limited Too sandy 	 0.50 	 Very limited Slope Droughty Depth to bedrock	 1.00 1.00 0.95
413B: Gale	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to bedrock	0.03
413C2: Gale	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to bedrock	0.01
435A: Streator	Depth to saturated zone	:	saturated zone	1.00	saturated zone	 1.00 1.00
448B, 448C2:	 Not limited	 	 Not limited	 	 Not limited	
512B, 512C2: Danabrook	 Not limited 	 	 Not limited 	 	 Not limited 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		 Off-road motorcycle trai	ls	 Golf fairways 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
516A: Faxon	Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 1.00	saturated zone	 1.00 1.00 0.06
527C2: Kidami	 Not limited 	 	 Not limited 	 	 Not limited 	
527D2: Kidami	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.04
530B: Ozaukee	 Not limited 	 	 Not limited 	 	 Not limited 	
530C2: Ozaukee	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to saturated zone	 0.08
530C3: Ozaukee	 Not limited	 	 Not limited	 	 Not limited 	
530D2: Ozaukee	Not limited	 	 Not limited 	 	Somewhat limited Depth to saturated zone Slope	 0.08 0.04
530D3: Ozaukee		 1.00 	 Very limited Water erosion	 1.00 	 Somewhat limited Depth to saturated zone Slope	 0.19 0.04
530E2: Ozaukee	 Somewhat limited Slope 	 0.02 	 Not limited 	 	 Very limited Slope Depth to saturated zone	 1.00 0.08
530F: Ozaukee	 Very limited Slope	 1.00	 Not limited 	 	 Very limited Slope	1.00
541B, 541B2, 541C2: Graymont	 Not limited 	 	 Not limited 	 	 Not limited 	
542A, 542B: Rooks	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
549B: Marseilles	 Not limited	 	 Not limited 	 	 Not limited 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	s	Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
549C2: Marseilles	 Not limited 	 	 Not limited	 	 Somewhat limited Depth to bedrock	
549D2: Marseilles	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope Depth to bedrock	 0.96 0.71
549F: Marseilles	 Very limited Slope 	 1.00	 Somewhat limited Slope 	 0.04	 Very limited Slope Depth to bedrock	 1.00 0.10
549G: Marseilles	 Very limited Slope Water erosion	 1.00 1.00	 Very limited Water erosion Slope	 1.00 1.00	 Very limited Slope Depth to bedrock	 1.00 0.10
554B: Kernan	 Somewhat limited Depth to saturated zone	 0.86	 Somewhat limited Depth to saturated zone	 0.86	 Somewhat limited Depth to saturated zone	0.94
560D2: St. Clair	 Not limited		 Not limited	 	 Somewhat limited Slope	0.04
560E: St. Clair	 Somewhat limited Slope 	 0.02 	 Not limited 	 	 Very limited Slope Droughty Depth to saturated zone	 1.00 0.14 0.08
567B: Elkhart	 Not limited	 	 Not limited	 	 Not limited	
572A, 572B, 572C2: Loran	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75
614A, 614B: Chenoa	 Somewhat limited Depth to saturated zone	0.44	 Somewhat limited Depth to saturated zone	0.44	 Somewhat limited Depth to saturated zone	0.75
662B: Barony	 Not limited		 Not limited	 	 Not limited	
663B: Clare	 Not limited		 Not limited 	 	 Not limited 	
667B: Kaneville	 Not limited		 Not limited 	 	 Not limited 	
668B: Somonauk	 Not limited 		 Not limited 	 	 Not limited 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	s	Off-road motorcycle trai	ls	Golf fairways 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
675B, 675C2: Greenbush	 Not limited 	 	 Not limited 	 	 Not limited 		
679B: Blackberry	 Not limited 	 	 Not limited 	 	 Not limited 		
680B: Campton	 Not limited 	 	 Not limited 	 	 Not limited 		
712A: Spaulding	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Ponding	1.00	
715A: Arrowsmith	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75	
732A, 732B: Appleriver	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75	
791A, 791B: Rush	 Not limited		 Not limited		 Not limited		
792A, 792B: Bowes	 Not limited		 Not limited		 Not limited		
794G: Marseilles	 Very limited Slope Water erosion	 1.00 1.00	!	 1.00 1.00		 1.00 0.10	
Northfield	 Very limited Slope 	 1.00 	 Very limited Slope 	 1.00 	 Very limited Depth to bedrock Slope Droughty	 1.00 1.00 0.53	
Ritchey	 Very limited Slope 	 1.00 	 Very limited Slope 	 1.00 	 Very limited Depth to bedrock Slope Droughty	 1.00 1.00 0.12	
802B: Orthents, loamy	 Not limited	 	 Not limited	 	 Not limited		
802D: Orthents, loamy	 Very limited Water erosion 	 1.00	 Very limited Water erosion 	 1.00	 Somewhat limited Slope 	 0.04	
804D: Orthents, acid	 Very limited Too clayey 	 1.00 	 Very limited Too clayey 	 1.00 	 Very limited Too clayey Slope	 1.00 0.01	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	s	Off-road motorcycle trai	ls	Golf fairways 		
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
804G: Orthents, acid	Slope	 1.00 1.00	 Very limited Slope Too clayey	 1.00 1.00	· -	 1.00 1.00	
805B: Orthents, clayey	_	 1.00	 Very limited Too clayey	 1.00	 Very limited Too clayey Droughty	 1.00 0.48	
814A: Muscatune	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44	 Somewhat limited Depth to saturated zone	0.75	
Buckhart	 Not limited	 	 Not limited	 	 Not limited		
817A: Channahon	 Not limited 	 	 Not limited 	 	 Very limited Depth to bedrock Droughty	 1.00 0.65	
Hesch	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to bedrock	0.29	
817B: Channahon	 Not limited 	 	 Not limited 	 	 Very limited Depth to bedrock Droughty	 1.00 0.91	
Hesch	 Not limited 	 	 Not limited 	 	 Somewhat limited Depth to bedrock Droughty	 0.95 0.05	
818A: Flanagan	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.44 	 Somewhat limited Depth to saturated zone	 0.75	
Catlin	Not limited 	 	Not limited 		Not limited		
820E: Hennepin	 Somewhat limited Slope	 0.68	 Not limited 	 	 Very limited Slope	1.00	
Casco	 Somewhat limited Slope	 0.68	 Not limited 	 	 Very limited Slope	1.00	
820G: Hennepin	 Very limited Slope		 Very limited Slope	 1.00	 Very limited Slope	 1.00	
Casco	 Very limited Slope	 1.00	 Very limited Slope	1.00	 Very limited Slope Droughty	1.00	
830: Landfills	 Not rated 	 	 Not rated 	 	 Not rated 	 	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	s	Off-road motorcycle trai	ls	 Golf fairways 		
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
864:			 		l I		
Pits, quarry	Not rated	 	 Not rated 		 Not rated 		
865:	İ	İ	İ	İ	İ	İ	
Pits, gravel	Not rated		Not rated 		Not rated		
969E2:		į		į	į	į	
Casco	Somewhat limited Slope	0.02	Not limited 		Very limited Slope	1.00	
					Droughty	0.05	
Rodman	 Somewhat limited Slope 	 0.02 	 Not limited 	 	 Very limited Slope Droughty Gravel content	 1.00 1.00 0.02	
969F:			 		 	İ	
Casco	Very limited Slope 	1.00	 Not limited 		 Very limited Slope Droughty	 1.00 0.34	
Rodman	 Verv limited		 Not limited		 Very limited		
110 0011011	Slope	1.00			Slope	1.00	
			 		Droughty Gravel content	0.94	
11003							
1103A: Houghton	 Very limited		 Very limited		 Very limited		
-	Depth to	1.00		1.00	Organic matter	1.00	
	saturated zone Organic matter	1.00	saturated zone Organic matter	1.00	content Depth to	1.00	
	content		content		saturated zone		
1480A:			 		 		
Moundprairie	 Very limited		 Very limited		 Very limited	i	
	Depth to	1.00		1.00	Ponding	1.00	
	saturated zone Ponding	1.00	saturated zone Ponding	1.00	Flooding Depth to	1.00	
	Flooding	0.40	Flooding	0.40	saturated zone		
3073A:			 		 		
Ross	Somewhat limited Flooding	0.40	 Somewhat limited Flooding	0.40	 Very limited Flooding	1.00	
3076A:			l		 		
Otter	 Very limited		 Very limited		 Very limited		
	Depth to	1.00	Depth to	1.00	Ponding	1.00	
	saturated zone		saturated zone		Flooding	1.00	
	Ponding Flooding	1.00	Ponding Flooding	1.00	Depth to saturated zone	1.00	
3082A:			 		 		
Millington	 Very limited		 Very limited		 Very limited		
•	Depth to	1.00	Depth to	1.00	Ponding	1.00	
	saturated zone		saturated zone		Flooding	1.00	
	Ponding Flooding	1.00	Ponding Flooding	1.00	Depth to saturated zone	1.00	
						İ	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	s	Off-road motorcycle trai	ls	Golf fairways		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
3107A: Sawmill	 Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40	 Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	
3321A: Du Page	<u>.</u> !	 0.40	 Somewhat limited Flooding		 Very limited Flooding	1.00	
3451A: Lawson	 Somewhat limited		 Somewhat limited		 Very limited		
	Depth to saturated zone Flooding	0.44	Depth to saturated zone Flooding	0.44	Flooding Depth to saturated zone	1.00 0.75 	
3480A: Moundprairie	 Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40	 Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40	 Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	
3800A: Psamments	 Very limited Too sandy Flooding	 1.00 0.40	 Very limited Too sandy Flooding	 1.00 0.40	 Very limited Flooding Droughty Too sandy	 1.00 0.69 0.50	
7073A: Ross	 Not limited	 	 Not limited	 	 Not limited	 	
8073A: Ross	 Not limited		 Not limited 		 Somewhat limited Flooding	0.60	
8107A: Sawmill	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.60	
8151A: Ridgeville	 Somewhat limited Depth to saturated zone 	 0.44 	 Somewhat limited Depth to saturated zone 	 0.44 	 Somewhat limited Depth to saturated zone Flooding	 0.75 0.60	
8404A: Titus	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.60	

Table 15b.--Recreational Development--Continued

Map symbol and soil name	Paths and trail	.s	Off-road motorcycle trai	ls	Golf fairways		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
8451A:					 		
LawsonSomewhat limited		i	Somewhat limited	i	Somewhat limited	i	
	Depth to	0.44	Depth to	0.44	Depth to	0.75	
	saturated zone	İ	saturated zone	İ	saturated zone	İ	
					Flooding	0.60	
8516A:			 		 		
Faxon	Very limited		Very limited		Very limited		
	Depth to	1.00	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		saturated zone		
	Ponding	1.00	Ponding	1.00	Ponding	1.00	
					Flooding	0.60	
					Depth to bedrock	0.06	

Table 16.--Wildlife Habitat

(See text for definitions of terms used in this table)

]	Po		for habit	at elemen	ts	Potential as habitat for				
Map symbol and soil name	 Grain and seed crops	Grasses and	Wild herba- ceous plants	 Hardwood trees 	Conif- erous plants	 Wetland plants 	 Shallow water areas	 Openland wildlife 	 Woodland wildlife 		
23B: Blount	 Fair	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	Poor.	
51A: Muscatune	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.	
60C2: La Rose	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
60D2: La Rose	 Fair 	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.	
61A: Atterberry	 Fair 	 Good 	 Good 	 Good	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair. 	
61B: Atterberry	 Fair 	 Good	 Good	 Good	 Good	 Poor	 Very poor.	 Good	 Good	 Very poor.	
67A: Harpster	 Fair 	 Fair 	 Fair 	 Fair 	 Poor 	 Good 	 Good 	 Fair 	 Fair 	 Good. 	
68A: Sable	 Fair 	 Fair	 Fair	 Fair 	 Poor	 Good	 Good	 Fair 	 Fair 	Good.	
86B: Osco	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
86C2: Osco	 Fair 	 Good 	 Good	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
87A, 87B: Dickinson	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
87C2: Dickinson	 Fair 	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.	
88B, 88D: Sparta	 Poor 	 Poor 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.	
91A: Swygert	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.	
91B, 91B2: Swygert	 Fair 	 Good	 Good	 Good	 Good	 Fair 	 Poor	 Good	 Good	 Poor.	
91C2, 91C3: Swygert	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor. 	

Table 16.--Wildlife Habitat--Continued

	1		otontin1	for bobit				Dotontio	l og bobi	
Man nambal		P		for habit	at elemen	ts 	1	Potentia	l as habit	tat ior
Map symbol and soil name	Grain and seed crops	Grasses and	Wild herba- ceous plants	 Hardwood trees	Conif- erous	 Wetland plants	 Shallow water areas	Openland	 Woodland wildlife 	:
103A: Houghton	 Poor 	 Poor 	 Poor 	 Poor 	 Very poor. 	 Good 	 Good 	 Poor 	 Poor 	 Good.
104A: Virgil	 Fair	 Good	 Fair	 Good	 Good	 Fair	 Fair	 Fair	 Good	 Fair.
105A, 105B: Batavia	 Good	 Good	 Good	 Good	 Good	 Poor	 Very poor.	 Good	 Good	 Very poor.
105C2: Batavia	 Fair 	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.
125A: Selma	 Fair	 Fair 	 Fair	 Fair	 Poor	 Good	 Good	 Fair	 Fair	 Good.
131B: Alvin	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
131C2: Alvin	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
132A: Starks	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.
134A, 134B: Camden	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
134C2: Camden	 Fair 	 Good	 Good	 Good	 Good	 Poor	 Very poor.	 Good 	 Good	 Very poor.
134D2, 134D3, 134F: Camden	1	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.
146A: Elliott	 Fair 	 Good 	 Good 	 Good	 Good 	 Fair 	 Fair 	 Good 	 Good	 Fair.
146B, 146B2: Elliott	 Fair 	 Good 	 Good 	 Good	 Good 	 Fair 	 Poor 	 Good 	 Good	 Poor.
147B2: Clarence	 Fair 	 Good	 Good	 Fair 	 Fair 	 Fair 	 Poor 	 Good	 Fair 	Poor.
148A, 148B: Proctor	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
148C2: Proctor	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
149A: Brenton	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.

Table 16.--Wildlife Habitat--Continued

	1	Pe	otential	for habit	at elemen	ts		Potentia	l as habi	tat for
Map symbol and soil name	Grain and seed crops	Grasses and	Wild herba- ceous plants	 Hardwood trees	Conif-erous	 Wetland plants	 Shallow water areas		 Woodland wildlife	
151A: Ridgeville		 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.
151B: Ridgeville	 Good	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.
152A: Drummer	 Fair	 Fair 	 Fair 	 Fair	 Poor	 Good	 Good	 Fair 	 Fair 	 Good.
154A: Flanagan	 Fair 	 Good	 Good	 Good	 Good	 Fair	 Fair 	 Good 	 Good 	 Fair.
171A: Catlin	 Good	 Good	 Good	 Good	 Good	 Poor	 Poor	 Good	 Good	 Poor.
171B, 171B2: Catlin	 Good	 Good	 Good	 Good	 Good	 Poor	 Very poor.	 Good	 Good	 Very poor.
171C2, 171C3: Catlin	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
193C2: Mayville	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
198A: Elburn	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.
199A, 199B: Plano	 Good	 Good	 Good	 Good 	 Good 	 Poor	 Very poor.	 Good	 Good	 Very poor.
199C2: Plano	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
206A: Thorp	 Fair	 Fair	 Fair	 Fair	 Poor	 Good	 Good	 Fair	 Fair 	 Good.
210A: Lena	 Poor 	 Poor 	 Poor 	 Poor 	 Very poor.	 Good 	 Good 	 Poor 	 Poor 	 Good.
219A: Millbrook	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
223B, 223B2: Varna	 Good	 Good	 Good	 Good	 Good	 Poor	 Poor	 Good	 Good	 Poor.
223C2, 223C3: Varna	 Fair 	 Good	 Good	 Good	 Good	 Poor 	 Very poor.	 Good	 Good 	 Very poor.
223D2, 223D3: Varna	 Fair 	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.
228B: Nappanee	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Poor 	 Good 	 Good 	 Poor.

Table 16.--Wildlife Habitat--Continued

	I	P	otential	for habit	at elemen	ts		Potentia	l as habi	tat for
Map symbol and soil name	Grain	Grasses and	Wild herba- ceous plants	 Hardwood trees	Conif-erous	 Wetland plants	 Shallow water		 Woodland wildlife	!
228C2, 228C3: Nappanee	crops Fair 		prants Good	 Good 	plants Good	 Poor 	areas Very poor.	 Good 	 Good	 Very poor.
232A: Ashkum	 Fair	 Fair	 Fair	 Fair	 Poor	 Good	 Good	 Fair	 Fair	Good.
233A: Birkbeck	 Good	 Good	 Good	 Good	 Good	 Poor	 Poor	 Good	 Good	 Poor.
233B: Birkbeck	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
233C2: Birkbeck	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
234A: Sunbury	 Fair 	 Good	 Good	 Good	 Good	 Fair 	 Fair 	 Good	 Good 	 Fair.
235A: Bryce	 Fair	 Fair	 Poor	 Fair	 Poor	 Fair	 Good	 Fair	 Fair	 Fair.
236A: Sabina	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
238A: Rantoul	 Poor	 Poor	 Poor	 Poor	 Poor	 Fair	 Good	 Poor	 Poor	 Fair.
241C3: Chatsworth	 Poor 	 Poor 	 Fair 	 Poor 	 Poor	 Poor	 Very poor.	 Poor 	 Poor 	 Very poor.
241D3, 241E3: Chatsworth	 Poor 	 Poor 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.
241F, 241G: Chatsworth	 Very poor.	 Poor 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.
242A: Kendall	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
243A: St. Charles	 Good	 Good	 Good	 Good	 Good	 Poor	 Poor	 Good	 Good	 Poor.
243B: St. Charles	 Good	 Good	 Good	 Good	 Good	 Poor	 Very poor.	 Good	 Good	 Very poor.
243C2: St. Charles	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
244A: Hartsburg	 Fair	 Fair	 Fair	 Fair	 Poor	 Good	 Good	 Fair	 Fair 	 Good.
278A, 278B: Stronghurst	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.

Table 16.--Wildlife Habitat--Continued

	1	Pe	otential	for habita	at elemen	ts		Potentia	Potential as habitat for-		
Map symbol and soil name	 Grain and seed crops	 Grasses and legumes	Wild herba- ceous plants	 Hardwood trees 	 Conif- erous plants	 Wetland plants 	 Shallow water areas	 Openland wildlife 	 Woodland wildlife 	'	
279B: Rozetta	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
280C2: Fayette	 Fair 	 Good 	 Good	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
290A, 290B: Warsaw	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
290C2: Warsaw	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
293A: Andres	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair. 	
293B: Andres	 Fair	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.	
294B: Symerton	 Good 	 Good	 Good	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
294C2: Symerton	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.	
295A: Mokena	 Fair	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.	
295B: Mokena	 Fair	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.	
298B: Beecher	 Fair	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.	
311B: Ritchey	 Poor 	 Poor 	 Fair 	 Fair 	 Fair 	 Poor 	 Very poor.	 Poor 	 Fair 	 Very poor.	
314A: Joliet	 Poor	 Poor	 Fair	 Fair	 Poor	 Good	 Poor	 Poor	 Fair	 Fair.	
315B: Channahon	 Poor 	 Poor 	 Fair 	 Fair 	 Fair 	 Poor	 Very poor.	 Poor 	 Fair 	 Very poor.	
317A: Millsdale	 Fair	 Fair	 Fair	 Fair	 Poor	 Good	 Fair	 Fair	 Fair	 Fair.	
318B, 318C2: Lorenzo	 Fair 	 Fair 	 Good 	 Fair 	 Fair 	 Poor 	 Very poor.	 Fair 	 Fair 	 Very poor.	
320B: Frankfort	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Poor 	 Good 	 Good 	 Poor. 	

Table 16.--Wildlife Habitat--Continued

			Potential as habitat for-							
Map symbol	<u>'</u>		Wild	for habit			1	FOCESTICIA.	25 11201	
and soil name	Grain and seed crops	Grasses and legumes	herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	:
320C2: Frankfort	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
325B: Dresden	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
325C2: Dresden	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
327B: Fox	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
327C2: Fox	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
327D2: Fox	 Fair 	 Good 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Good 	 Good 	 Very poor.
330A: Peotone	 Poor 	 Poor 	 Poor 	 Poor 	 Poor 	 Good 	 Good 	 Poor 	 Poor 	 Good.
344A, 344B: Harvard	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
344C2: Harvard	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
356A: Elpaso	 Fair 	 Fair 	 Fair 	 Fair 	 Poor 	 Good 	 Good 	 Fair 	 Fair 	 Good.
375A: Rutland	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.
375B, 375B2: Rutland	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
388B, 388B2: Wenona	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor	 Very poor.	 Good 	 Good 	 Very poor.
388C2: Wenona	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
397F: Boone	 Very poor.	 Poor 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.
413B, 413C2: Gale	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.

Table 16.--Wildlife Habitat--Continued

	I	Pe	otential	for habit	at elemen	ts		Potentia	l as habi	tat for
Map symbol	i		Wild	1		1	1	i i	I	
and soil name	Grain	Grasses	herba-	Hardwood	Conif-	Wetland	Shallow	Openland	 Woodland	 Wetland
and boll name	and seed		ceous	trees	erous	plants	water		wildlife	
	1			Liees		prants	:	wildlife	wildile	wildile
	crops	legumes	plants	<u> </u>	plants	<u> </u>	areas	1	<u> </u>	<u> </u>
	!	!	!		!	!	!	!	!	!
435A:										
Streator	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
448B:										
Mona	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	i	İ	i	İ	i	İ	poor.	i	i	poor.
	i	i	i	i	i	i		i	i	
448C2:					 				! !	I I
Mona	Pair	Good	Good	Good	Good	Poor	17077	Good	Good	17027
MOIIa	raii	GOOG	GOOG	GOOG	GOOG	FOOL	Very	GOOG	GOOG	Very
			!				poor.	!		poor.
	!	ļ	!			!	!	!		
512B:	!	!	!		!	!	!	!	!	!
Danabrook	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
							poor.			poor.
512C2:										
Danabrook	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	İ	İ	İ	İ	İ	i	poor.	İ	İ	poor.
	i	i	i	i	i	i	i	i	i	i
516A:	i	i	i	i	i	i	i	i	i	İ
Faxon	Fair	Fair	Fair	Fair	Poor	Good	Fair	Fair	Fair	Fair.
1 anon				1	1	1	1		1	1
527C2:	1	I I		I I	I I	1	1		 	l I
	l martin					 D	 			
Kidami	rair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	!	!	!		!	!	poor.	!	!	poor.
527D2:										
Kidami	Fair	Good	Good	Good	Good	Very	Very	Good	Good	Very
						poor.	poor.			poor.
			1							
530B:			1					1		
Ozaukee	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
		İ			İ			i	İ	
530C2, 530C3:	i	i	i	i	i	i	i	i	i	İ
Ozaukee	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	 Very
Ozaukee	Fall	1	GOOG	J	GOOG	1		GOOG	1	_
		l I		1		1	poor.			poor.
			!					!		
530D2, 530D3:										
Ozaukee	Fair	Good	Good	Good	Good	Very	Very	Good	Good	Very
						poor.	poor.			poor.
530E2, 530F:										
Ozaukee	Poor	Fair	Good	Good	Good	Very	Very	Fair	Good	Very
			1			poor.	poor.	1		poor.
	İ	į	İ	İ	İ	i	i	İ	İ	İ
541B, 541B2:	i	i	i	i	i	i	i	i	i	İ
Graymont	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
01470110	1	1	1	1	1		poor.		1	poor.
	1	I I		I I	I I	1	poor.		 	poor.
F.4.1.GO :	1	I I		I I	1	l i	l i	1	l I	l I
541C2:	!	 				!_	I		 	
Graymont	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	[[poor.	[!	poor.
	[[[!	!	[
542A:										
Rooks	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
542B:										
Rooks	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	i	i	i	i	i	i	poor.	i	i	poor.
	i	i	i	i	i	i	1	i	i	
	I	I .	I	1	I	T.	1	I	I .	I

Table 16.--Wildlife Habitat--Continued

		P	otential	for habit	at elemen	ts		Potentia	l as habit	tat for
Map symbol		I	Wild	I	<u> </u>	1	I	I	I	l
and soil name	Grain	Grasses	herba-	Hardwood	Conif-	Wetland	Shallow	Onenland	Woodland	 Wetland
una 2011 numo	and seed		ceous	trees	erous	plants	water		wildlife	
				L		prancs		#1101116	WIIGIIIE	WIIGIIIE
	crops	legumes	plants	<u> </u>	plants	<u> </u>	areas	<u> </u>	<u> </u>	<u> </u>
	!	!	!		!		!	!	!	!
549B, 549C2:										
Marseilles	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
							poor.			poor.
	ĺ	İ	ĺ	İ	ĺ	Ì	İ	ĺ	ĺ	ĺ
549D2:	i	i	i	į	i	İ	i	i	i	İ
Marseilles	 Fair	Good	Good	Good	Good	Very	Very	Good	Good	Very
Marberreb	1	1	1	1	1	-	-	1	1	-
				1	I I	poor.	poor.			poor.
	!	!					!			
549F:	!	!	!		!		!	!	!	!
Marseilles	Very	Fair	Good	Good	Good	Very	Very	Fair	Good	Very
	poor.					poor.	poor.			poor.
549G:	1	1					1			
Marseilles	Very	Poor	Good	Good	Good	Very	Very	Poor	Good	Very
	poor.	i	i	i	i	poor.	poor.	i	i	poor.
	2002.		! 	l I	İ	2002.	2002.	! 	! 	1
554B:			I I	I I	I I			I I	I I	l I
	l Les des					l market	 D			
Kernan	rair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
		!					!			
560D2:										
St. Clair	Fair	Good	Good	Good	Good	Very	Very	Good	Good	Very
						poor.	poor.			poor.
	1	1					1			
560E:	i	i	i	į	i	İ	i	i	i	İ
St. Clair	Poor	Fair	Good	Good	Good	Very	Very	Fair	Good	Very
201 01411	1		1	1	1	poor.	poor.		1	poor.
	1	1	1	1	I I	poor.	poor.	 	 	poor.
E CED					1					
567B:						-	1			
Elkhart	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
		!					poor.			poor.
572A:										
Loran	Good	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
	ĺ	İ	ĺ	İ	ĺ	Ì	İ	ĺ	ĺ	ĺ
572B:	i	i	i	į	i	İ	i	i	i	İ
Loran	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	1	1	1	1	1		poor.	1	1	poor.
			I I	I I	I I		poor.	I I	I I	poor.
550.00				1	I I					l I
572C2:						-	1			
Loran	Fair	Good	Good	Good	Good	Poor	Very	Good	Good	Very
							poor.			poor.
614A:										
Chenoa	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
	ĺ	İ	ĺ	İ	ĺ	Ì	İ	ĺ	ĺ	ĺ
614B:	i	i	i	į	i	İ	i	i	i	İ
Chenoa	 Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
circiiou		1	1	1	1	1 4 1 1	1	1	1	1
CC2D.	1	1	I I	I I	I I	1	1	I I	I I	l I
662B:						-	1			
Barony	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
							poor.			poor.
663B:										
Clare	Good	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	i	i	i	i	į	İ	poor.	i	i	poor.
	i	i	i	i	i	i	2	i	i	, <u>.</u> •
667B:	1	1			i		1			ı İ
	l L	l L	l Cood	 Cood	 Cood	Door	170	l L	l L	170
Kaneville	G00d	Good	Good	Good	Good	Poor	Very	Good	Good	Very
	Į.	Į.	Į.	I	ļ	ļ.	poor.	ļ.	ļ.	poor.
	I	I	I			I	I	I	I	l

Table 16.--Wildlife Habitat--Continued

	1	D.		for habit		<u> </u>		Dotontio	l og bobi	
Map symbol	<u> </u>	P(Wild	or nabit	at elemen	ts 	1	Potentia	l as habi	tat ior
and soil name	Grain and seed crops	Grasses and	herba- ceous plants	 Hardwood trees	Conif- erous	 Wetland plants	Shallow water areas	Openland wildlife	 Woodland wildlife 	:
668B: Somonauk	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
675B: Greenbush	 Good	 Good 	 Good	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
675C2: Greenbush	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
679B: Blackberry	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
680B: Campton	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
712A: Spaulding	 Fair 	 Fair 	 Fair 	 Fair 	 Poor	 Good	 Good	 Fair 	 Fair 	 Good.
715A: Arrowsmith	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.
732A: Appleriver	 Fair 	 Good 	 Good 	 Good 	 Good 	 Fair 	 Fair 	 Good 	 Good 	 Fair.
732B: Appleriver	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
791A, 791B: Rush	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
792A, 792B: Bowes	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
794G: Marseilles	 Very poor.	 Poor 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Poor 	 Good 	 Very poor.
Northfield	 Very poor.	 Poor 	 Fair 	 Fair 	 Fair 	 Very poor.	 Very poor.	 Poor 	 Fair 	 Very poor.
Ritchey	 Very poor. 	 Poor 	 Fair 	 Fair 	 Fair 	 Very poor.	 Very poor. 	 Poor 	 Fair 	 Very poor.
802B: Orthents, loamy	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
802D: Orthents, loamy	 Fair 	 Fair 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Fair 	 Good 	 Very poor.

Table 16.--Wildlife Habitat--Continued

	 	P	otential	for habit	at elemen	ts		Potentia	l as habi	tat for
Map symbol and soil name	Grain	 Grasses and	Wild herba- ceous	 Hardwood trees	erous	 Wetland plants	 Shallow water		 Woodland wildlife	
804D: Orthents, acid	crops Very poor.	legumes Poor	plants Poor	 Poor	plants Poor	Very poor.	areas Very poor.	 Poor	 Poor	 Very
804G: Orthents, acid	j - !	 Poor 	 Poor 	 Poor	 Poor 	poor. Very poor.	poor. Very poor.	 Poor	 Poor 	poor. Very poor.
805B: Orthents, clayey	j 	 Fair 	 Fair 	 Fair 	 Fair 	 Poor	 Very poor.	 Fair 	 Fair 	 Very poor.
814A: Muscatune	 Fair 	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
Buckhart	 Good 	 Good 	 Good 	Good	 Good 	Poor	Poor	Good	 Good 	Poor.
817A, 817B: Channahon	 Poor 	 Poor 	 Fair 	 Fair 	 Fair 	 Poor	 Very poor.	 Poor 	 Fair 	 Very poor.
Hesch	 Fair 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
818A: Flanagan	 Fair 	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
Catlin	Good	 Good 	 Good 	Good	 Good	Poor	Poor	Good	 Good 	Poor.
820E: Hennepin	 Poor 	 Fair 	 Good 	 Good 	 Good	 Very poor.	 Very poor.	 Fair 	 Good 	 Very poor.
Casco	 Poor 	 Fair 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Fair 	 Good 	 Very poor.
820G: Hennepin	 Very poor.	 Poor 	 Good 	 Good 	 Good 	 Very poor.	 Very poor.	 Poor 	 Good 	 Very poor.
Casco	 Very poor.	 Poor 	 Fair 	 Poor 	 Poor 	Very poor.	Very poor.	 Poor 	 Poor 	 Very poor.
969E2: Casco	 Poor 	 Fair 	 Good 	 Fair 	 Fair 	 Very poor.	 Very poor.	 Fair 	 Fair 	 Very poor.
Rodman	 Poor 	 Poor 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.
969F: Casco	 Poor 	 Fair 	 Good 	 Fair 	 Fair 	 Very poor.	 Very poor.	 Fair 	 Fair 	 Very poor.
Rodman	 Very poor.	 Fair 	 Fair 	 Poor 	 Poor 	 Very poor.	 Very poor.	 Poor 	 Poor 	 Very poor.
1103A: Houghton	 Very poor. 	 Poor 	 Poor 	 Poor 	 Very poor.	 Good 	 Good 	 Poor 	 Poor 	 Good.

Table 16.--Wildlife Habitat--Continued

	<u> </u>	P		for habit	at elemen	ts		Potentia	l as habi	tat for
Map symbol and soil name	Grain and seed crops	Grasses and	Wild herba- ceous plants	 Hardwood trees	Conif- erous	 Wetland plants	 Shallow water areas	: -	 Woodland wildlife 	
1480A: Moundprairie	 Very poor.	 Poor 	 Poor 	 Poor 	 Very poor.	 Good 	 Good 	 Poor 	 Poor 	 Good.
3073A: Ross	 Poor 	 Fair 	 Fair 	 Good 	 Fair 	 Fair 	 Very poor.	 Fair 	 Good 	 Poor.
3076A: Otter	 Poor 	 Fair 	 Fair 	 Fair 	 Poor 	 Good	 Good	 Fair 	 Fair 	 Good.
3082A: Millington	 Poor 	 Fair 	 Fair 	 Fair 	 Poor 	 Good	 Good	 Fair 	 Fair 	 Good.
3107A: Sawmill	 Poor	 Fair 	 Fair 	 Fair 	 Poor 	Good	 Good 	 Fair 	 Fair 	 Good.
3321A: Du Page	 Poor 	 Fair 	 Fair 	 Good	 Good	 Poor 	 Very poor.	 Fair 	 Good	 Poor.
3451A: Lawson	 Poor 	 Fair 	 Fair 	 Good 	 Fair 	 Fair 	 Fair 	 Fair 	 Good 	 Fair.
3480A: Moundprairie	 Poor	 Fair 	 Fair 	 Fair	 Poor	 Good	 Good	 Fair 	 Fair 	 Good.
3800A: Psamments	 Poor 	 Poor 	 Fair 	 Poor 	 Poor 	 Poor 	 Very poor.	 Poor 	 Poor 	 Very poor.
7073A: Ross	 Good 	 Good	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
8073A: Ross	 Good 	 Good 	 Good 	 Good 	 Good 	 Poor 	 Very poor.	 Good 	 Good 	 Very poor.
8107A: Sawmill	 Poor 	 Fair 	 Fair 	 Fair 	 Poor 	 Good 	 Good 	 Fair 	 Fair 	 Good.
8151A: Ridgeville	 Fair	 Good	 Good	 Good	 Good	 Fair	 Poor	 Good	 Good	 Poor.
8404A: Titus	 Fair	 Fair	 Fair	 Fair	 Poor	Good	 Good	 Fair	 Fair	 Good.
8451A: Lawson	 Fair 	 Good	 Good	 Good	 Good	 Fair	 Fair	 Good	 Good	 Fair.
8516A: Faxon	 Fair 	 Fair 	 Fair 	 Fair 	 Poor 	 Good	 Fair 	 Fair 	 Fair 	 Fair.

Table 17a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
23B: Blount	 Very limited	 	 Very limited	 	 Very limited		
	Depth to saturated zone Shrink-swell	1.00		1.00	: -	1.00 0.50	
51A:	 	į	 	į	 	į	
Muscatune	 Somewhat limited Depth to saturated zone	0.98	 Very limited Depth to saturated zone	1.00	 Somewhat limited Depth to saturated zone	0.98	
	Shrink-swell	0.50	Shrink-swell	0.50	!	0.50	
60C2: La Rose	 Not limited 		 Not limited 		 Somewhat limited Slope	 0.97	
6002.	 		 		21969		
60D2: La Rose	 Somewhat limited Slope	0.96	 Somewhat limited Slope	0.96	 Very limited Slope	1.00	
61A:							
Atterberry	Very limited Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00	
	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50	
61B:	 		 		 		
Atterberry	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00 	
	Shrink-swell	0.50	!	0.50	1	0.50	
67A:	 				 		
Harpster	Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00	
	Depth to saturated zone Shrink-swell	1.00 0.50	Depth to saturated zone Shrink-swell	1.00 0.50	Depth to saturated zone Shrink-swell	1.00 0.50	
68A:	 		 		 		
Sable	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00	
	Ponding Shrink-swell	1.00		1.00		1.00	
86B:	 		 		 		
Osco	Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.15	Somewhat limited Shrink-swell 	 0.50 	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	 Dwellings with basements		Small commercial buildings		
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>
86C2: Osco	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.15 	 Somewhat limited Slope Shrink-swell	 0.97 0.50
87A: Dickinson	 Not limited	 	 Not limited	 	 Not limited	
87B: Dickinson	 Not limited		 Not limited		 Not limited	
87C2: Dickinson	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	0.97
88B: Sparta	 Not limited 	 	 Not limited 	 	 Not limited 	
88D: Sparta	 Somewhat limited Slope 	 0.04	 Somewhat limited Slope 	 0.04	 Very limited Slope	1.00
91A: Swygert	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	1.00
91B: Swygert	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
91B2: Swygert	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
91C2: Swygert	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Shrink-swell Depth to saturated zone Slope	 1.00 0.98 0.12
91C3: Swygert	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Somewhat limited Depth to saturated zone Shrink-swell Slope	 0.98 0.50 0.12

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings 		
	Rating class and	Value	Rating class and	Value	Rating class and	Value	
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u>i</u>	
103A:							
Houghton	 Verv limited		 Very limited	1	 Very limited		
3	Subsidence	1.00	: -	1.00	: -	1.00	
	Depth to	1.00	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		saturated zone		
	Organic matter	1.00	Organic matter	1.00	Organic matter	1.00	
	content		content		content		
	Ponding	1.00	Ponding	1.00	Ponding	1.00	
104A:	 		 	1	 		
Virgil	 Very limited		 Very limited		 Very limited		
5	Depth to	1.00	: -	1.00	: -	1.00	
	saturated zone	İ	saturated zone	ĺ	saturated zone		
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50	
				ļ			
105A: Batavia	 Comparbat limited		 Somewhat limited		 Somewhat limited		
Batavia	Shrink-swell	0.50	!	0.50	1	0.50	
	BILLIM BROLL						
105B:		į		į		i	
Batavia	Somewhat limited		Somewhat limited		Somewhat limited		
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50	
10500							
105C2: Batavia	 Comewhat limited		 Somewhat limited	l I	 Very limited	1	
Dacavia	Shrink-swell	0.50	!	0.50	: -	1.00	
	Slope	0.01	!	0.01		0.50	
	j	į	j	į	İ	İ	
125A:							
Selma	· -	1	Very limited	1	Very limited		
	Depth to	1.00	-	1.00	:	1.00	
	saturated zone Ponding	1.00	saturated zone	1.00	saturated zone	1.00	
	Shrink-swell	0.50	Shrink-swell	0.50		0.50	
131B:		İ		Ì	İ	Ì	
Alvin	Not limited	[Not limited		Not limited		
10170							
131C2: Alvin	 Not limited		 Not limited	l I	 Somewhat limited		
AIVIII		İ		İ	Slope	0.97	
		İ		İ		İ	
132A:	ĺ	İ	İ	Ì	İ	İ	
Starks		:	Very limited	1	Very limited		
	Depth to	1.00	: -	1.00		1.00	
	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50	
	SHITHK-SWELL	0.30	SHITHK-SWEIT	0.30	SHITHK-SWEIT	10.30	
134A:		İ		İ		i	
Camden	Somewhat limited	İ	Not limited	į	Somewhat limited	j	
	Shrink-swell	0.50	[Shrink-swell	0.50	
1245							
134B: Camden		1	 Not limited	1	 Somewhat limited		
Camden	Shrink-swell	0.50	NOC IIMICEG	l I	Shrink-swell	0.50	
				İ			
134C2:	İ	i		j		i	
Camden	Somewhat limited		Not limited		Somewhat limited		
	Shrink-swell	0.50	[Slope	0.97	
					Shrink-swell	0.50	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		 Small commercia buildings	al
	Rating class and limiting features	Value	Rating class and limiting features	Value	 Rating class and limiting features	Value
134D2: Camden	 Somewhat limited Slope Shrink-swell	 0.96 0.50	 Somewhat limited Slope 	 0.96	 Very limited Slope Shrink-swell	 1.00 0.50
134D3: Camden	 Somewhat limited Slope Shrink-swell	 0.96 0.50	 Somewhat limited Slope Shrink-swell	 0.96 0.50	 Very limited Slope Shrink-swell	1.00
134F: Camden	 Very limited Slope Shrink-swell	 1.00 0.50	 Very limited Slope Shrink-swell	 1.00 0.50	 Very limited Slope Shrink-swell	 1.00 0.50
146A: Elliott	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
146B: Elliott	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
146B2: Elliott	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
147B2: Clarence	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	0.98
148A: Proctor	 Somewhat limited Shrink-swell	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell	0.50
148B: Proctor	 Somewhat limited Shrink-swell	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell	0.50
148C2: Proctor	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Slope Shrink-swell	0.97
149A: Brenton	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	 Dwellings witho basements	ut	 Dwellings with basements		 Small commercia buildings	ıl
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
151A: Ridgeville	 Somewhat limited Depth to saturated zone	 0.98	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.98
151B: Ridgeville	 Somewhat limited Depth to saturated zone	 0.98 	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.98
152A: Drummer	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50
154A: Flanagan	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
171A: Catlin	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
171B: Catlin	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
171B2: Catlin	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
171C2: Catlin	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Slope Shrink-swell	 0.97 0.50
171C3: Catlin	 Somewhat limited Shrink-swell 			 0.99 0.50	 Somewhat limited Slope Shrink-swell	 0.97 0.50
193C2: Mayville	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Slope Shrink-swell	 0.97 0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercia buildings	al
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
198A: Elburn	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	0.98
199A: Plano	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	
199B: Plano	 Somewhat limited Shrink-swell	 0.27	 Somewhat limited Shrink-swell	 0.27	 Somewhat limited Shrink-swell	0.27
199C2: Plano	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Slope Shrink-swell	0.97
206A: Thorp	 Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50
210A: Lena	 Very limited Subsidence Depth to saturated zone Organic matter content Ponding	 1.00 1.00 1.00 1.00		 1.00 1.00 1.00 1.00	 Very limited Subsidence Depth to saturated zone Organic matter content Ponding	 1.00 1.00 1.00
219A: Millbrook	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	1.00
223B: Varna	 Somewhat limited Shrink-swell 	 0.50 	saturated zone	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
223B2: Varna	 Somewhat limited Shrink-swell 		 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Shrink-swell 	0.50
223C2: Varna	 Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell Slope 	0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
223C3: Varna	 Not limited 	 	 Somewhat limited Depth to saturated zone	 0.99	 Somewhat limited Slope 	 0.12	
223D2: Varna	 Somewhat limited Shrink-swell Slope	 0.50 0.04		 0.99 0.04	 Very limited Slope Shrink-swell	 1.00 0.50	
223D3: Varna	 Somewhat limited Slope 	 0.04 	 Somewhat limited Depth to saturated zone Slope	 0.99 0.04	 Very limited Slope 	1.00	
228B: Nappanee	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	saturated zone	 1.00 0.50	saturated zone	 1.00 0.50	
228C2: Nappanee	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	saturated zone	 1.00 0.50	saturated zone	 1.00 0.50 0.12	
228C3: Nappanee	Very limited Depth to saturated zone Shrink-swell	:	Very limited Depth to saturated zone Shrink-swell	1	Very limited Depth to saturated zone Shrink-swell Slope	 1.00 0.50 0.12	
232A: Ashkum	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	saturated zone Ponding	 1.00 1.00 0.50	saturated zone Shrink-swell	 1.00 1.00 1.00	
233A: Birkbeck	 Somewhat limited Shrink-swell 		 Very limited Depth to saturated zone Shrink-swell	 0.99 0.92	 Somewhat limited Shrink-swell 	0.92	
233B: Birkbeck	 Somewhat limited Shrink-swell 	 0.92 	 Very limited Depth to saturated zone Shrink-swell	 0.99 0.92	 Somewhat limited Shrink-swell 	 0.92 	
233C2: Birkbeck	 Somewhat limited Shrink-swell 	 0.50 	 Very limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Slope Shrink-swell 	 0.97 0.50	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercia buildings	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
234A: Sunbury	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00
235A: Bryce	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00
236A: Sabina	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell	1.00
238A: Rantoul	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00
241C3: Chatsworth	 Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.16 	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Somewhat limited Shrink-swell Depth to saturated zone Slope	0.50
241D3: Chatsworth	 Somewhat limited Shrink-swell Depth to saturated zone Slope	 0.50 0.16 0.04	 Very limited Depth to saturated zone Shrink-swell Slope	 	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16
241E3: Chatsworth	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16	 Very limited Slope Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16
241F: Chatsworth	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16	 Very limited Slope Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16
241G: Chatsworth	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16	 Very limited Slope Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		 Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
242A: Kendall	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
243A: St. Charles	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50
243B: St. Charles	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50
243C2: St. Charles	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Slope Shrink-swell	 0.97 0.50
244A: Hartsburg	 Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	 Very limited Ponding Depth to saturated zone	 1.00 1.00 	 Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50
278A: Stronghurst	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
278B: Stronghurst	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
279B: Rozetta	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.15 	 Somewhat limited Shrink-swell 	 0.50
280C2: Fayette	!	 0.50 	 Somewhat limited Shrink-swell	 0.50 		 0.97 0.50
290A: Warsaw	!	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell 	 0.50
290B: Warsaw	!	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell	0.50
290C2: Warsaw	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.12

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercia buildings	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
293A: Andres	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	saturated zone	 0.99 0.50
293B:	 	l I	 	l I	 	
Andres	Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	saturated zone	 1.00 0.50	saturated zone	0.99
294B:	İ	j		j		i
Symerton	Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Depth to saturated zone	 0.97 	Somewhat limited Shrink-swell 	 0.50
294C2: Symerton	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Slope Shrink-swell	0.97
295A: Mokena	Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Somewhat limited Depth to saturated zone Shrink-swell	0.98
295B: Mokena	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.22	 Somewhat limited Depth to saturated zone Shrink-swell	0.98
298B: Beecher	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Shrink-swell	1.00
311B: Ritchey	 Very limited Depth to hard bedrock Shrink-swell	 1.00 0.50	 Very limited Depth to hard bedrock Shrink-swell	 1.00 0.50	 Very limited Depth to hard bedrock Shrink-swell	1.00
314A: Joliet	 Very limited Depth to saturated zone Depth to hard bedrock Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Depth to hard bedrock Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Depth to hard bedrock Ponding	 1.00 1.00
315B: Channahon	 Very limited Depth to hard bedrock Shrink-swell	 1.00 0.50	 Very limited Depth to hard bedrock Shrink-swell	 1.00 0.50	 Very limited Depth to hard bedrock Shrink-swell	 1.00 0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
317A: Millsdale	 Very limited Depth to saturated zone Shrink-swell Ponding Depth to hard bedrock	 1.00 1.00 1.00 0.06	saturated zone Shrink-swell	 1.00 1.00 1.00	saturated zone	 1.00 1.00 1.00 0.06
318B: Lorenzo	 Not limited	 	 Not limited	 	 Not limited	
318C2: Lorenzo	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope 	 0.12
320B: Frankfort	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
320C2: Frankfort	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	saturated zone	 1.00 0.50	 Very limited Depth to saturated zone Shrink-swell Slope	 1.00 0.50 0.12
325B: Dresden	 Somewhat limited Shrink-swell 	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell 	 0.50
325C2: Dresden	 Somewhat limited Shrink-swell	 0.50	 Not limited 	 	Somewhat limited Shrink-swell Slope	0.50
327B: Fox	 Somewhat limited Shrink-swell 	 0.50	 Not limited 	 	 Somewhat limited Shrink-swell 	 0.50
327C2: Fox	 Not limited 	 	 Not limited	 	 Somewhat limited Slope	0.12
327D2: Fox	 Somewhat limited Shrink-swell Slope	 0.50 0.04	 Somewhat limited Slope 	 0.04 	 Very limited Slope Shrink-swell	 1.00 0.50
330A: Peotone	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	saturated zone Shrink-swell	 1.00 1.00 1.00	saturated zone Shrink-swell	 1.00 1.00 1.00
344A: Harvard	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell 	0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
344B: Harvard	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell	 0.50
344C2: Harvard	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50	Somewhat limited Slope Shrink-swell	0.97
356A: Elpaso	 Very limited Depth to saturated zone Ponding Shrink-swell	 	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50
375A: Rutland	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
375B: Rutland	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
375B2: Rutland	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
388B: Wenona	 Very limited Shrink-swell 	 1.00 	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.99 	 Very limited Shrink-swell	
388B2: Wenona	 Very limited Shrink-swell	 1.00 	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.99	 Very limited Shrink-swell	1.00
388C2: Wenona	 Very limited Shrink-swell 	 1.00 	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.99 	 Very limited Shrink-swell Slope 	 1.00 0.97
397F: Boone	 Very limited Slope 	 1.00 	 Very limited Slope Depth to soft bedrock	 1.00 0.95 	 Very limited Slope 	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
413B: Gale	 Not limited 	 	Somewhat limited Depth to soft bedrock	 0.03	 Not limited 	
413C2: Gale	 Not limited 	 	 Somewhat limited Depth to soft bedrock	 0.01 	 Somewhat limited Slope 	 0.12
435A: Streator	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell Ponding	 1.00 1.00 1.00
448B: Mona	 Somewhat limited Shrink-swell 	 0.50 	saturated zone	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
448C2: Mona	 Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Slope Shrink-swell	 0.97 0.50
512B: Danabrook	 Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	0.50
512C2: Danabrook	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Slope Shrink-swell	0.97
516A: Faxon	 Very limited Depth to saturated zone Ponding Depth to hard bedrock	 1.00 1.00 0.06	Very limited Depth to saturated zone Depth to hard bedrock Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding Depth to hard bedrock	 1.00 1.00 0.06
527C2: Kidami	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell Slope 	 0.50 0.12
527D2: Kidami	 Somewhat limited Shrink-swell Slope 	 0.50 0.04 	 Somewhat limited Depth to saturated zone Slope	 0.99 0.04	 Very limited Slope Shrink-swell 	 1.00 0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		 Dwellings with basements 	Dwellings with basements		 Small commercial buildings	
	Rating class and	Value	Rating class and	Value	Rating class and	Value	
	limiting features		limiting features	<u> </u>	limiting features		
530B: Ozaukee	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Shrink-swell	 0.50	
530C2: Ozaukee	 Somewhat limited Depth to saturated zone	 0.16 	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone Slope	 0.16 0.12	
530C3: Ozaukee	 Not limited 	 	 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Slope 	 0.12 	
530D2: Ozaukee	 Somewhat limited Depth to saturated zone Slope	 0.16 0.04	saturated zone	 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.16	
530D3: Ozaukee	Somewhat limited Depth to saturated zone Slope	 0.39 0.04	saturated zone	 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.39	
530E2: Ozaukee	Slope	 1.00 0.50 0.16	saturated zone	 1.00 1.00	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16	
530F: Ozaukee	 Very limited Slope Shrink-swell	 1.00 0.50 		 1.00 0.99 	 Very limited Slope Shrink-swell	 1.00 0.50 	
541B: Graymont	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone	 0.99 	 Somewhat limited Shrink-swell 	 0.50 	
541B2: Graymont	 Somewhat limited Shrink-swell 	 0.50 	saturated zone	 0.99 0.50	 Somewhat limited Shrink-swell 	 0.50 	
541C2: Graymont	 Somewhat limited Shrink-swell 	 0.50 	 Very limited Depth to saturated zone	 0.99 	 Somewhat limited Slope Shrink-swell	 0.97 0.50	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542A: Rooks	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50
542B: Rooks	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50
549B: Marseilles	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.16 	 Somewhat limited Shrink-swell 	 0.50
549C2: Marseilles	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to soft bedrock Shrink-swell	 0.79 0.50	 Somewhat limited Slope Shrink-swell 	 0.97 0.50
549D2: Marseilles	 Somewhat limited Slope Shrink-swell	 0.96 0.50 	Somewhat limited Slope Depth to soft bedrock Shrink-swell	0.96	 Very limited Slope Shrink-swell	 1.00 0.50
549F: Marseilles	 Very limited Slope Shrink-swell	 1.00 0.50 	 Very limited Slope Shrink-swell Depth to soft bedrock	 1.00 0.50 0.10	 Very limited Slope Shrink-swell	 1.00 0.50
549G: Marseilles	 Very limited Slope Shrink-swell 	 1.00 0.50 	 Very limited Slope Shrink-swell Depth to soft bedrock	 1.00 0.50 0.10	 Very limited Slope Shrink-swell 	 1.00 0.50
554B: Kernan	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00
560D2: St. Clair	 Somewhat limited Shrink-swell Slope 	 0.50 0.04 		 0.99 0.50 0.04	 Very limited Slope Shrink-swell 	 1.00 0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
560E: St. Clair	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16	Very limited Depth to saturated zone Slope Shrink-swell	 1.00 1.00 0.50	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.16
567B: Elkhart	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.15 	 Somewhat limited Shrink-swell 	0.50
572A: Loran	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50
572B: Loran	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 - 1.00 - 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	0.98
572C2: Loran	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Somewhat limited Depth to saturated zone Slope Shrink-swell	0.98
614A: Chenoa	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	 Very limited Depth to saturated zone	 1.00 	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
614B: Chenoa	Very limited Shrink-swell Depth to saturated zone	 1.00 0.98 	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98
662B: Barony	 Somewhat limited Shrink-swell 	!		 0.99 0.50	 Somewhat limited Shrink-swell 	 0.50
663B: Clare	!	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	0.99	 Somewhat limited Shrink-swell 	0.50

Table 17a.--Building Site Development--Continued

Map symbol and soil name	 Dwellings witho basements 	ut	 Dwellings with basements	Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
667B: Kaneville	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	 0.50 	
668B: Somonauk	 Somewhat limited Shrink-swell 	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	 0.50 	
675B: Greenbush	 Somewhat limited Shrink-swell	 0.50 		 0.50 0.15	 Somewhat limited Shrink-swell	 0.50 	
675C2: Greenbush	 Somewhat limited Shrink-swell	 0.50 		 0.50 0.15	:	 0.97 0.50	
679B: Blackberry	 Somewhat limited Shrink-swell	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	0.99	 Somewhat limited Shrink-swell	 0.50 	
680B: Campton	 Somewhat limited Shrink-swell	 0.50 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell	 0.50 	
712A: Spaulding	 Very limited Depth to saturated zone Ponding Shrink-swell	 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	
715A: Arrowsmith	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	
732A: Appleriver	Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	
732B: Appleriver	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	 Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		 Dwellings with basements	Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
791A: Rush	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell	 0.50	 Somewhat limited Shrink-swell	 0.50	
791B: Rush	 Somewhat limited Shrink-swell	0.50	 Somewhat limited Shrink-swell	0.50	 Somewhat limited Shrink-swell	0.50	
792A: Bowes	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell 	 0.50	 Somewhat limited Shrink-swell 	0.50	
792B: Bowes	 Somewhat limited Shrink-swell	0.50	 Somewhat limited Shrink-swell	0.50	 Somewhat limited Shrink-swell	0.50	
794G: Marseilles	 Very limited Slope Shrink-swell 	 1.00 0.50	 Very limited Slope Shrink-swell Depth to soft bedrock	 1.00 0.50 0.10	 Very limited Slope Shrink-swell 	1.00	
Northfield	 Very limited Slope Depth to hard bedrock	 1.00 1.00	 Very limited Slope Depth to hard bedrock	 1.00 1.00	 Very limited Slope Depth to hard bedrock	 1.00 1.00	
Ritchey	 Very limited Slope Depth to hard bedrock	 1.00 1.00	 Very limited Slope Depth to hard bedrock	 1.00 1.00 	 Very limited Slope Depth to hard bedrock	 1.00 1.00	
802B: Orthents, loamy	 Somewhat limited Shrink-swell	 0.50 	Somewhat limited Shrink-swell Depth to saturated zone	 0.50 0.47	 Somewhat limited Shrink-swell	0.50	
802D: Orthents, loamy	 Somewhat limited Shrink-swell Slope 	0.50	Somewhat limited Shrink-swell Depth to saturated zone Slope	 0.50 0.47 0.04	 Very limited Slope Shrink-swell 	1.00	
804D: Orthents, acid	 Somewhat limited Shrink-swell Slope 	 0.50 0.01 	Somewhat limited Shrink-swell Depth to saturated zone Slope	 0.50 0.47 0.01	 Very limited Slope Shrink-swell 	1.00	
804G: Orthents, acid	 Very limited Slope Shrink-swell 	 1.00 0.50 	 Very limited Slope Shrink-swell Depth to saturated zone	 1.00 0.50 0.47	 Very limited Slope Shrink-swell	1.00	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho	ut	Dwellings with basements	Dwellings with basements		Small commercial buildings	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
805B: Orthents, clayey	limiting features	 1.00	 Very limited	 1.00 0.99	 Very limited	 1.00	
814A: Muscatune	 Somewhat limited Depth to saturated zone Shrink-swell	:	 Very limited Depth to saturated zone Shrink-swell	1.00	 Somewhat limited Depth to saturated zone Shrink-swell	 0.98 0.50	
Buckhart		į	 Somewhat limited		 Somewhat limited	0.50	
817A: Channahon	 Somewhat limited Depth to soft bedrock	 0.50	 Very limited Depth to soft bedrock	 1.00	 Somewhat limited Depth to soft bedrock	 1.00	
Hesch	 Not limited 		 Somewhat limited Depth to soft bedrock	 0.29 	 Not limited 		
817B: Channahon	 Somewhat limited Depth to soft bedrock	 0.50 	 Very limited Depth to soft bedrock	 1.00 	 Somewhat limited Depth to soft bedrock	 1.00	
Hesch	Not limited - 	 	Somewhat limited Depth to soft bedrock	 0.95 	Not limited - 	 	
818A: Flanagan	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98	 Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	 Very limited Shrink-swell Depth to saturated zone	 1.00 0.98	
Catlin	 Somewhat limited Shrink-swell 	 0.50 	Somewhat limited Depth to saturated zone Shrink-swell	 0.99 0.50	 Somewhat limited Shrink-swell 	 0.50 	
820E: Hennepin	 Verv limited		 Very limited		 Very limited		
Casco	Slope	1.00		1.00	Slope Very limited Slope	1.00	
820G:	 		l		 		
Hennepin	 Very limited Slope 	1.00	 Very limited Slope 	 1.00	 Very limited Slope 	1.00	
Casco	 Very limited Slope 	1.00	 Very limited Slope 	 1.00	 Very limited Slope 	1.00	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features		limiting features	
830:	 		 	 	 	
Landfills	 Not rated	i	 Not rated	İ	 Not rated	
		1				
864: Pits, quarry	 Not rated		 Not rated	l	 Not rated	
rics, quarry		i	NOC Taced			
865:	İ	İ		İ		į
Pits, gravel	Not rated		Not rated		Not rated	
969E2:	 		 	 	 	
Casco	 Very limited	i	 Very limited	j	 Very limited	j
	Slope	1.00	Slope	1.00	Slope	1.00
Rodman	 Verv limited		 Very limited	 	 Very limited	
no anan	Slope	1.00	_	1.00		1.00
	ļ.	1				
969F: Casco	 Vorus limited		 Very limited		 Very limited	
casco	Slope	1.00	_	1.00		1.00
		į		į		į
Rodman	-	1	Very limited		Very limited	1 00
	Slope	1.00	Slope 	1.00	Slope 	1.00
1103A:		i		İ		i
Houghton	: -	1	Very limited	1	Very limited	
	Ponding Subsidence	1.00	Ponding Subsidence	1.00 1.00		1.00
	Depth to	1.00	Depth to	1.00	!	1.00
	saturated zone		saturated zone		saturated zone	
	Organic matter	1.00	Organic matter	1.00	Organic matter	1.00
	content		content		content	
1480A:	 	i	 	l İ	 	
Moundprairie	Very limited	i	 Very limited	j	Very limited	j
	Ponding	1.00	Ponding	1.00		1.00
	Flooding	1.00	Flooding	1.00	!	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Baculaced Zone	i	Bacuraceu Zone		sacuraced zone	1
3073A:	İ	İ		İ		į
Ross	: -	1	Very limited	:	Very limited	!
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	 		Depth to saturated zone	0.16	 	
		i		İ		
3076A:						
Otter		1	Very limited		Very limited	
	Ponding	1.00	Ponding Flooding	1.00	Ponding Flooding	1.00
	Flooding Depth to	1.00	Depth to	1.00 1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
3082A: Millington	 Very limited		 Very limited	 	 Very limited	
MITITING COM	Flooding	1.00	Very limited Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone	j	saturated zone	İ	saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	I	1	Shrink-swell	0.50		

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings witho basements	out	Dwellings with basements	•	Small commercia buildings 	al
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3107A:	 				 	
Sawmill	Very limited	j	Very limited	į	Very limited	į
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3321A:						
Du Page	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to	0.15		
	l I		saturated zone		 	
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	0.98	Depth to	1.00	Depth to	0.98
	saturated zone	ļ	saturated zone		saturated zone	
	 		Shrink-swell	0.50	 	
3480A:						
Moundprairie	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding 	1.00	Ponding	1.00
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Flooding	1.00	!	1.00	Flooding	1.00
		ļ	Depth to	0.15		
	 		saturated zone		 	
7073A:						İ
Ross	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to	0.15		
	 		saturated zone		 	
8073A:						İ
Ross			Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
		ļ	Depth to	0.15		
	 		saturated zone		 	l I
8107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50	saturated zone Shrink-swell	0.50
	SHITHW-SWELL		 SHIIHV-RMEII		 SHITHY-RMETI	0.30
8151A:	İ	İ	İ	İ	İ	İ
Ridgeville			Very limited	[Very limited	1
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	0.98	Depth to	1.00	Depth to	0.98
	saturated zone	1	saturated zone		saturated zone	

Table 17a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements	Dwellings with basements		Small commercial buildings	
	Rating class and	Value	Rating class and	Value	Rating class and	Value	
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features		
8404A:			 		 		
Titus	 Very limited	i	 Very limited	i	 Very limited	i	
	Flooding	1.00	Flooding	1.00	Flooding	1.00	
	Depth to	1.00	Depth to	1.00	Depth to	1.00	
	saturated zone	İ	saturated zone	İ	saturated zone	İ	
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00	
	Ponding	1.00	Ponding	1.00	Ponding	1.00	
8451A:			 				
Lawson	Very limited		Very limited		Very limited		
	Flooding	1.00	Flooding	1.00	Flooding	1.00	
	Depth to	0.98	Depth to	1.00	Depth to	0.98	
	saturated zone		saturated zone		saturated zone		
8516A:			 		 		
Faxon	Very limited	İ	Very limited	İ	Very limited	Ì	
	Flooding	1.00	Flooding	1.00	Flooding	1.00	
	Depth to	1.00	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		saturated zone		
	Ponding	1.00	Depth to hard	1.00	Ponding	1.00	
	Depth to hard	0.06	bedrock		Depth to hard	0.06	
	bedrock		Ponding	1.00	bedrock		

Table 17b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Local roads an streets	.d	Shallow excavati 	ons	Lawns and landsca	ping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Valu
23B: Blount	· -	:	 Very limited	1	 Somewhat limited	
	Frost action Low strength Depth to	1.00 1.00 0.99	saturated zone	1.00 0.50	Depth to saturated zone 	0.99
	saturated zone Shrink-swell	0.50	Cutbanks cave	0.10	 	
51A:						
Muscatune	Frost action Low strength Depth to	 1.00 1.00 0.75	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.75
	saturated zone Shrink-swell	0.50	 	 	 	
60C2:				ļ		
La Rose	Somewhat limited Low strength Frost action	0.78		0.50	Not limited 	
60D2:			 		 	
La Rose	Somewhat limited Slope Low strength Frost action	 0.96 0.78 0.50	Dense layer	 0.96 0.50 0.10	Somewhat limited Slope 	0.96
61A: Atterberry	 Very limited Frost action	 1.00	 Very limited Depth to	 1.00	 Somewhat limited Depth to	 0.94
	Low strength Depth to saturated zone Shrink-swell	1.00 1.00 0.94 	saturated zone		saturated zone	
	BHIIM BWCII					
61B: Atterberry	 Very limited Frost action Low strength	 1.00 1.00	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.94
	Depth to saturated zone Shrink-swell	0.94	Cutbanks cave 	0.10 	 	
67A: Harpster	 Very limited		 Very limited		 Very limited	
	Ponding Depth to saturated zone Frost action	1.00 1.00 	Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Ponding Depth to saturated zone	1.00 1.00
	Low strength Shrink-swell	1.00 1.00 0.50				

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	đ	 Shallow excavati 	ons	Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68A: Sable	Depth to saturated zone Frost action Low strength	1.00 1.00 1.00		 1.00 1.00 0.10	 Very limited Depth to saturated zone Ponding	 1.00 1.00
	Ponding Shrink-swell 	1.00 0.50 	 	 	 	
86B: Osco	 Frost action Low strength Shrink-swell	 1.00 1.00 0.50	saturated zone	 0.15 0.10	 Not limited 	
86C2: Osco	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	saturated zone	 0.15 0.10	 Not limited 	
87A: Dickinson	 Somewhat limited Frost action	 0.50	 Very limited Cutbanks cave	 1.00	 Not limited 	
87B: Dickinson	 Somewhat limited Frost action 	0.50	 Very limited Cutbanks cave	 1.00	 Not limited 	
87C2: Dickinson	 Somewhat limited Frost action	0.50	 Very limited Cutbanks cave	 1.00	 Not limited 	
88B: Sparta	 Not limited 		 Very limited Cutbanks cave	 1.00	 Somewhat limited Droughty 	0.08
88D: Sparta	 Somewhat limited Slope 	 0.04 	 Very limited Cutbanks cave Slope	 1.00 0.04	 Somewhat limited Droughty Slope	 0.07 0.04
91A: Swygert	Very limited Low strength Shrink-swell Depth to saturated zone Frost action	 1.00 1.00 0.75 0.50	 Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.32 0.10	 Somewhat limited Depth to saturated zone	 0.75
91B: Swygert	 Very limited Low strength Shrink-swell Depth to saturated zone Frost action	 1.00 1.00 0.75 0.50	 Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.32 0.10	 Somewhat limited Depth to saturated zone 	 0.75

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavati 	ons	Lawns and landscaping 	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>
91B2:	 		 		 	
Swygert	 Very limited	i	 Very limited	İ	 Somewhat limited	
	Low strength	1.00	Depth to	1.00	Depth to	0.75
	Shrink-swell	1.00	!		saturated zone	
	Depth to	0.75		0.32		
	saturated zone	0.50	Cutbanks cave	0.10	 	
	Flost action		 		 	
)1C2:		i		į		i
Swygert	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	· -	1.00	:	0.75
	Shrink-swell	1.00	saturated zone		saturated zone	
	Depth to saturated zone	0.75	Cutbanks cave	0.10	 	
	Frost action	0.50	100 clayey		 	
	İ	į	İ	į	İ	į
01C3:						
Swygert	very limited Low strength	1.00	Very limited Depth to	1.00	Somewhat limited Depth to	0.75
	Depth to	0.75	saturated zone	1	saturated zone	0.75
	saturated zone		Too clayey	0.32		i
	Shrink-swell	0.50		0.10		i
	Frost action	0.50		İ		İ
L03A:	l I		l I		 	
Houghton	 Very limited		 Very limited		 Very limited	i
•	Depth to	1.00		1.00	: -	1.00
	saturated zone	İ	saturated zone	İ	content	İ
	Subsidence	1.00		1.00	Depth to	1.00
	Frost action	1.00	content		saturated zone	
	Ponding 	1.00	Ponding 	1.00	Ponding 	1.00
104A:		i		İ		
Virgil	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	· -	1.00	:	0.94
	Low strength	1.00	saturated zone		saturated zone	-
	Depth to saturated zone	0.94	Cutbanks cave	1.00	 	
	Shrink-swell	0.50	 		 	i
	İ	İ	İ	į	İ	į
L05A: Batavia			Somewhat limited		 Not limited	
bacavia	Frost action	1.00		0.10	NOC IIMICEG	1
	Low strength	1.00			 	i
	Shrink-swell	0.50		İ		į
l05B: Batavia	 Verv limited		 Somewhat limited	 	 Not limited	
	Frost action	1.00	!	0.10		i
	Low strength	1.00				i
	Shrink-swell	0.50		į		į
0502 •	 		 		 	
l05C2: Batavia	 Very limited		 Somewhat limited		 Somewhat limited	
	Frost action	1.00		0.10	Slope	0.01
	Low strength	1.00	Slope	0.01		İ
	Shrink-swell	0.50				
	Slope	0.01	i .	1	i .	1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	d	 Shallow excavati 	ons	Lawns and landscaping 	
	Rating class and limiting features	1	Rating class and limiting features	:	Rating class and limiting features	Value
125A:	 		 		 	
Selma	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		
	Shrink-swell	0.50	 	 	 	
131B:						
Alvin	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
131C2:			 		 	
Alvin	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
132A:	 		 	 		
Starks	Very limited	İ	Very limited	ĺ	Somewhat limited	İ
	Frost action	1.00	Depth to	1.00	Depth to	0.94
	Low strength	1.00	saturated zone	ĺ	saturated zone	İ
	Depth to	0.94	Cutbanks cave	1.00		
	saturated zone					
	Shrink-swell	0.50	 			
134A:			 			
Camden	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50	 		 	
134B:			 			
Camden	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50	 		 	
134C2:						
Camden	Very limited		Very limited		Not limited	
		1	Cutbanks cave	1.00		
		1.00				
	Shrink-swell	0.50	 		 	
134D2:	İ	İ	İ	į	j	į
Camden			Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Slope	0.96
	Low strength	1.00	Slope	0.96	[
	Slope	0.96		ļ		!
	Shrink-swell	0.50	 		 	
134D3:	İ	İ		İ		İ
Camden			Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Slope	0.96
		1 4 4 4				1
	Low strength	1.00	Slope	0.96	!	!
	Low strength Slope Shrink-swell	1.00 0.96 0.50	Slope	0.96	 	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		 Shallow excavati 	ons	Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134F: Camden	Very limited Slope Frost action Low strength Shrink-swell	 1.00 1.00 1.00	 Very limited Slope Cutbanks cave	 1.00 1.00	 Very limited Slope 	 1.00
146A: Elliott	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.88 0.50 0.50	 Very limited Depth to saturated zone Dense layer Cutbanks cave	 1.00 0.50 0.10	 Somewhat limited Depth to saturated zone	 0.88
146B: Elliott	Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.88 0.50 0.50	 Very limited Depth to saturated zone Dense layer Cutbanks cave	 1.00 0.50 0.10	 Somewhat limited Depth to saturated zone 	 0.88
146B2: Elliott	Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.88 0.50 0.50	 Very limited Depth to saturated zone Dense layer Cutbanks cave	 1.00 0.50 0.10	 Somewhat limited Depth to saturated zone 	 0.88
147B2: Clarence	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.75 0.50 0.50	saturated zone Too clayey	 1.00 0.50 0.10	 Somewhat limited Depth to saturated zone Droughty	 0.75 0.01
148A: Proctor	Frost action	 1.00 1.00 0.50	 Very limited Cutbanks cave 	 1.00 	 Not limited 	
148B: Proctor	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Somewhat limited Cutbanks cave 	 0.10 	 Not limited 	
148C2: Proctor	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Somewhat limited Cutbanks cave 	 0.10 	 Not limited 	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an streets	d	Shallow excavati 	ons	Lawns and landsca	ping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149A: Brenton		 1.00 1.00 0.75 0.50	saturated zone	 1.00 1.00	 Somewhat limited Depth to saturated zone 	 0.75
151A: Ridgeville	 Somewhat limited Depth to saturated zone Frost action	 0.75 0.50	saturated zone	 1.00 1.00	 Somewhat limited Depth to saturated zone	0.75
151B: Ridgeville	 Somewhat limited Depth to saturated zone Frost action	1	 Very limited Depth to saturated zone Cutbanks cave	 1.00 1.00	 Somewhat limited Depth to saturated zone	 0.75
152A: Drummer	 Very limited Depth to saturated zone Frost action Low strength Ponding Shrink-swell	 1.00 1.00 1.00 1.00	saturated zone Cutbanks cave	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00
154A: Flanagan	 Very limited Frost action Low strength Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 0.75	saturated zone	 1.00 0.10	 Somewhat limited Depth to saturated zone	 0.75
171A: Catlin	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Somewhat limited Depth to saturated zone Cutbanks cave	 0.99 0.10	 Not limited 	
171B: Catlin	 Very limited Frost action Low strength Shrink-swell	1.00	saturated zone	0.99	 Not limited - 	
171B2: Catlin	 Very limited Frost action Low strength Shrink-swell	1.00	saturated zone	 0.99 0.10	 Not limited 	
171C2: Catlin	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	saturated zone	 0.99 0.10	 Not limited 	

Table 17b.--Building Site Development--Continued

	limiting features	Value 	Rating class and limiting features	Value	Rating class and	177-7
171C3: Ve	ery limited	l			limiting features	Value
Catlin Ve	-	i		į		İ
	-				 	
193C2:		1.00	Somewhat limited Depth to	0.99	Not limited	i i
193C2:	Frost action Low strength	1.00	saturated zone	10.33	 	1
193C2:	-	0.50	Cutbanks cave	0.10		
]		 	
Mayville Ve	ery limited		Somewhat limited		 Not limited	i
i	Frost action	1.00	Depth to	0.99	İ	i
į	Low strength	1.00	saturated zone	İ	İ	İ
į	Shrink-swell	0.50	Dense layer	0.50		ĺ
			Cutbanks cave	0.10		
198A:					 	
Elburn Ve	ery limited		Very limited		Somewhat limited	1
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	1.00		
	saturated zone					
	Shrink-swell	0.50	 		 	
199A:					 	1
Plano Ve	ery limited	ĺ	Very limited	İ	Not limited	ĺ
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
199B:					 	
Plano Ve	ery limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.27			 	
199C2:					 	
Plano Ve	ery limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50	 		 	
206A:		 			 	1
Thorp Ve	erv limited		 Very limited	i	 Very limited	i
	Ponding	1.00	_	1.00	. –	1.00
i	Depth to	1.00	Depth to	1.00	Depth to	1.00
i	saturated zone		saturated zone	i	saturated zone	
i		1.00	Cutbanks cave	1.00		i
į	Low strength	1.00		i	İ	i
	Shrink-swell	0.50		į	 -	į
210A:		 	[
Lena Ve	ery limited	İ	 Very limited	İ	 Very limited	İ
j	Depth to	1.00	Depth to	1.00	Organic matter	1.00
j	saturated zone		saturated zone		content	
j	Subsidence	1.00	Organic matter	1.00	Depth to	1.00
j	Frost action	1.00	content		saturated zone	
İ	Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	ıd	Shallow excavati 	ons	Lawns and landsca	ping
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
219A:			 			
Millbrook	 Very limited Frost action Low strength Depth to saturated zone Shrink-swell	 1.00 1.00 0.94 	saturated zone	 1.00 1.00 	 Somewhat limited Depth to saturated zone 	0.94
223B:	 		 			
Varna	 Very limited Low strength Shrink-swell Frost action	1.00	: -	 0.99 0.50 0.10 0.03	 	
223B2:	 	l	 	1	 	
Varna	 Very limited Low strength Shrink-swell Frost action	 1.00 0.50 0.50	saturated zone	 0.99 0.50 0.10	 Not limited 	
223C2:	 	l l	 	i i	 	
Varna	Very limited Low strength Shrink-swell Frost action			 0.99 0.50 0.10	Not limited	
223C3:			 			
Varna	Very limited Low strength Frost action 		Somewhat limited Depth to saturated zone Dense layer Cutbanks cave	 0.99 0.50 0.10	Not limited	
223D2:			 			
Varna	Very limited Low strength Shrink-swell Frost action Slope	 1.00 0.50 0.50 0.04	saturated zone Dense layer	 0.99 0.50 0.10 0.04	Somewhat limited Slope 	0.04
223D3:	 		 		 	
Varna	Very limited Low strength Frost action Slope 	 1.00 0.50 0.04	: -	 0.99 0.10 0.04 0.02	Somewhat limited Slope Content of large stones	0.04
228B:	İ		İ	İ	İ	İ
Nappanee	Very limited Frost action Low strength Depth to saturated zone Shrink-swell	 1.00 1.00 0.94 	: -	 1.00 0.50 0.32 0.10	Somewhat limited Depth to saturated zone 	 0.94

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavati 	ons	Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
228C2:	 		 		 	
Nappanee	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.94
	Low strength	1.00	saturated zone		saturated zone	
	Depth to	0.94	Dense layer	0.50	Droughty	0.01
	saturated zone		Too clayey	0.32		-
	Shrink-swell	0.50	Cutbanks cave	0.10	 	
228C3:						İ
Nappanee	: -	:	Very limited	!	Somewhat limited	-
	Frost action	1.00	-	1.00	:	0.94
	Low strength	1.00	!		saturated zone	
	Depth to	0.94	•	0.50	Droughty	0.29
	saturated zone		Cutbanks cave	0.10		-
	Shrink-swell	0.50	Too clayey	0.02	 	
232A:						į
Ashkum		:	Very limited	:	Very limited	
	Depth to	1.00	-	1.00	:	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Ponding Cutbanks cave	1.00	Ponding	1.00
	Low strength Shrink-swell	1.00	Cutbanks cave	10.10	 	
	Ponding	1.00	 		 	1
		į	į	į	į	į
233A: Birkbeck	 Very limited		 Very limited		 Not limited	
BILIDOON	Frost action	1.00	: -	0.99		i
	Low strength	1.00			 	1
	Shrink-swell	0.92	Cutbanks cave	0.10		İ
233B:						
Birkbeck	 Verv limited		 Very limited		 Not limited	
221.200.1	Frost action	1.00	: -	0.99		i
	Low strength	1.00			! 	i
	Shrink-swell	0.92	Cutbanks cave	0.10		į
233C2:	 		 		l I	
Birkbeck	 Very limited		 Very limited		 Not limited	i
	Frost action	1.00	Depth to	0.99	İ	İ
	Low strength	1.00	saturated zone			
	Shrink-swell	0.50	Cutbanks cave	0.10		
234A:	 				 	
Sunbury	Very limited	İ	 Very limited	i	Somewhat limited	į
	Low strength	1.00	Depth to	1.00	Depth to	0.94
	Shrink-swell	1.00	saturated zone		saturated zone	
	Depth to	0.94	Cutbanks cave	0.10		
	saturated zone					
	Frost action	0.50	 		 	
235A:	į	į	į	į		į
Bryce	: -	:	Very limited	:	Very limited	!
	Depth to	1.00		1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00		1.00	Too clayey	1.00
	Low strength Shrink-swell	1.00	Too clayey Cutbanks cave	0.50	Ponding	1.00
	Ponding	1.00	!	10.10	 	1
	1 01101119	1 0 0	I	1	I	1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an streets	d	 Shallow excavati 	ons	 Lawns and landsca 	aping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		ļ.		<u> </u>		Ţ
236A: Sabina	 Very limited Frost action Low strength	 1.00 1.00	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.94
	Shrink-swell Depth to saturated zone	1.00 0.94 	Cutbanks cave 	0.10 	 - -	
238A:		İ				İ
Rantoul	Very limited	[Very limited	1	Very limited	1
	Depth to	1.00	Depth to	1.00	: -	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Ponding	1.00		1.00
	Low strength Shrink-swell	1.00	Too clayey Cutbanks cave	0.59	Ponding	1
	Ponding	1.00				
241C3:	 		 		 	
Chatsworth	Very limited		Very limited		Very limited	
	Low strength	1.00	Depth to	1.00	Too clayey	1.00
	Shrink-swell	0.50	saturated zone		Droughty	0.97
	Frost action Depth to	0.50	Dense layer Cutbanks cave	0.50	Depth to saturated zone	0.08
	saturated zone		Too clayey	0.10	saturated zone	
241D3:						
Chatsworth	Very limited	İ	Very limited	ĺ	Very limited	Ì
	Low strength	1.00	Depth to	1.00	Too clayey	1.00
	Shrink-swell	0.50	saturated zone		Droughty	0.99
	Frost action	0.50	Dense layer	0.50	: -	0.08
	Depth to	0.08	Too clayey	0.32	!	
	saturated zone	0.04	Cutbanks cave	0.10 0.04	Slope 	0.04
241E3:	 		 		 	
Chatsworth	Very limited	į	Very limited	į	Very limited	İ
	Low strength	1.00	Depth to	1.00	Slope	1.00
	Slope	1.00	saturated zone		Too clayey	1.00
	Shrink-swell	0.50	Slope	1.00		0.90
	Frost action	0.50	Dense layer	0.50	: -	0.08
	Depth to saturated zone	0.08	Too clayey Cutbanks cave	0.32 0.10	saturated zone	
241F:	 		 	 	 	
Chatsworth	Very limited	İ	 Very limited	İ	 Very limited	į
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00		1.00		0.86
	Shrink-swell	0.50	saturated zone		Depth to	0.08
	Frost action	0.50		0.50	•	
	Depth to saturated zone	0.08	Too clayey Cutbanks cave	0.32	 	
241G:	 		 		 	
Chatsworth	Very limited	į	 Very limited	İ	 Very limited	i
	Slope	1.00	: -	1.00	Slope	1.00
	Low strength	1.00	Depth to	1.00		0.84
	Shrink-swell	0.50	saturated zone	ļ	Depth to	0.08
	Frost action	0.50	Dense layer	0.50	saturated zone	ļ
	Depth to	0.08		0.32	•	1
	saturated zone	1	Cutbanks cave	0.10	1	

Table 17b.--Building Site Development--Continued

Local roads and streets		Shallow excavati 	Shallow excavations		Lawns and landscaping	
Rating class and	Value	Rating class and	Value	Rating class and	Value	
limiting features	<u>i</u>	limiting features	<u>i</u>	limiting features	İ	
Very limited		 Very limited		 Somewhat limited	l	
-	:		1	!	0.94	
Low strength		: -	İ	saturated zone	i	
Depth to	0.94	Cutbanks cave	0.10		ĺ	
saturated zone						
Shrink-swell	0.50				ļ	
		 		 	l I	
Very limited		Somewhat limited	İ	 Not limited	i	
Frost action	1.00	Cutbanks cave	0.10	İ	į	
Low strength	1.00		İ	İ	ĺ	
Shrink-swell	0.50				ļ	
		l		 		
Very limited		 Somewhat limited		 Not limited	1	
Frost action	1.00	Cutbanks cave	0.10	İ	i	
Low strength	1.00		İ	İ	İ	
Shrink-swell	0.50				ļ	
Very limited		Somewhat limited	i	 Not limited	i	
Frost action	1.00	Cutbanks cave	0.10	İ	i	
Low strength	1.00		İ	İ	İ	
Shrink-swell	0.50				ļ	
		 	 	 	l I	
Very limited		 Very limited	i	 Very limited	i	
Ponding	:		:		1.00	
Depth to	1.00	Depth to	1.00	Depth to	1.00	
saturated zone		saturated zone		saturated zone		
	!	!	0.10		!	
-	!					
Snrink-swell	0.50	 		 		
	i		İ		i	
Very limited		Very limited		Somewhat limited		
Frost action	1	· -	1.00	:	0.94	
-				saturated zone		
_	0.94	Cutbanks cave	0.10	 -		
	0.50	 		 	l	
			į		İ	

-			1	!		
			1		0.94	
-	1		0.10	Sacuraced Zone	i	
saturated zone				İ	i	
Shrink-swell	0.50		İ		į	
Very limited		 Somewhat limited		Not limited		
Frost action	1.00	Depth to	0.15		i	
	1	: -	1	· !	i	
Low strength	1.00	saturated zone				
	Rating class and limiting features Very limited Frost action Low strength Depth to saturated zone Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Shrink-swell Very limited Frost action Low strength Depth to saturated zone Shrink-swell Very limited Frost action Low strength Depth to saturated zone Shrink-swell Very limited Frost action Low strength Depth to saturated zone Shrink-swell	Rating class and limiting features Very limited Frost action 1.00 1	Rating class and limiting features Vary limited Very limited Very limited Frost action 1.00 Depth to Low strength 1.00 Saturated zone Shrink-swell 0.50 Very limited Somewhat limited Frost action 1.00 Cutbanks cave Cu	Rating class and Value Rating class and Imiting features Imiting features	Rating class and Value Rating class and limiting features	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		 Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280C2: Fayette	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Somewhat limited Cutbanks cave 	 0.10 	 Not limited 	
290A: Warsaw	 Somewhat limited Shrink-swell Frost action Low strength	 0.50 0.50 0.22	 Very limited Cutbanks cave 	 1.00	 Not limited 	
290B: Warsaw	 Somewhat limited Shrink-swell Frost action Low strength	 0.50 0.50 0.22	 Very limited Cutbanks cave 	 1.00 	 Not limited 	
290C2: Warsaw	 Somewhat limited Frost action	 0.50	 - Very limited Cutbanks cave	 1.00	 Not limited 	
293A: Andres	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.78 0.50 0.50	 Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	 Somewhat limited Depth to saturated zone	 0.78
293B: Andres	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.78 0.50	 Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	 Somewhat limited Depth to saturated zone 	 0.78
294B: Symerton	 Somewhat limited Shrink-swell Frost action	 0.50 0.50	Very limited Cutbanks cave Depth to saturated zone	 1.00 0.97	 Not limited 	
294C2: Symerton	 Somewhat limited Shrink-swell Frost action	 0.50 0.50 	 Somewhat limited Depth to saturated zone Cutbanks cave	 0.99 0.10	 Not limited 	
295A: Mokena	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.75 0.50 0.50	 Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.50 0.10	 Somewhat limited Depth to saturated zone 	 0.75

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	đ	 Shallow excavati 	ons	Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
295B: Mokena	 Very limited Low strength Depth to saturated zone Shrink-swell Frost action	 1.00 0.75 0.50 0.50	saturated zone Too clayey	 1.00 0.41 0.10	 Somewhat limited Depth to saturated zone 	 0.75
298B: Beecher	 Very limited Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 0.50	saturated zone Dense layer	 1.00 0.50 0.10	 Very limited Depth to saturated zone 	 1.00
311B: Ritchey	 Very limited Depth to hard bedrock Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	bedrock	 1.00 0.10	 Very limited Depth to bedrock Droughty 	 1.00 0.23
314A: Joliet	Very limited Depth to hard bedrock Depth to saturated zone Frost action Low strength Ponding	 1.00 1.00 1.00 1.00	bedrock Depth to saturated zone Ponding	 1.00 1.00 1.00 0.10	 Very limited Depth to saturated zone Depth to bedrock Ponding Droughty	 1.00 1.00 1.00 0.05
315B: Channahon	 Very limited Depth to hard bedrock Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	bedrock	 1.00 0.10 	 Very limited Depth to bedrock Droughty 	 1.00 0.12
317A: Millsdale	Very limited Depth to saturated zone Frost action Low strength Shrink-swell Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to saturated zone Ponding Cutbanks cave	 1.00 1.00 1.00 0.10	 Very limited Depth to saturated zone Ponding Depth to bedrock	 1.00 1.00 0.06
318B: Lorenzo	 Somewhat limited Frost action	0.50	 Very limited Cutbanks cave	 1.00	 Somewhat limited Droughty 	0.01
318C2: Lorenzo	 Somewhat limited Frost action	0.50	 Very limited Cutbanks cave	 1.00	 Somewhat limited Droughty 	0.09

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	ıd	 Shallow excavati 	ons	Lawns and landscaping	
	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	Value
320B: Frankfort	 Very limited Frost action Low strength Depth to saturated zone Shrink-swell	1.00 1.00 0.94	!	1.00	saturated zone	 0.94
320C2: Frankfort	 Very limited Frost action Low strength Depth to saturated zone Shrink-swell	1	!	1.00	!	 0.94
325B: Dresden	 Somewhat limited Shrink-swell Frost action		 Very limited Cutbanks cave 	 1.00 	 Not limited 	
325C2: Dresden	 Somewhat limited Shrink-swell Frost action	0.50	 Very limited Cutbanks cave 	1.00	 Not limited 	
327B: Fox	 Somewhat limited Shrink-swell Frost action	0.50	1	1.00	 Not limited 	
327C2: Fox	 Somewhat limited Frost action		 Very limited Cutbanks cave	1.00	 Not limited 	
327D2: Fox	 Somewhat limited Shrink-swell Frost action Slope		 Very limited Cutbanks cave Slope	 1.00 0.04	· -	0.04
330A: Peotone		 1.00 1.00 1.00 1.00	saturated zone	 1.00 1.00 0.10 0.02	saturated zone Ponding	 1.00 1.00
344A: Harvard	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Very limited Cutbanks cave 	 1.00 	 Not limited 	
344B: Harvard	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	 Very limited Cutbanks cave 	 1.00 	 Not limited 	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an streets	d	Shallow excavati 	ons	Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		<u> </u>		İ		†
344C2: Harvard	Frost action Low strength	1.00	 Very limited Cutbanks cave 	1.00	 Not limited 	
	Shrink-swell	0.50	 		 	
356A: Elpaso	Depth to saturated zone Frost action Low strength	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding Cutbanks cave	 1.00 1.00 0.10	 Very limited Depth to saturated zone Ponding	 1.00 1.00
	Ponding Shrink-swell	1.00 0.50	 		 	
375A:						
Rutland	Very limited Low strength Shrink-swell Depth to saturated zone Frost action	 1.00 1.00 0.75 0.50	: -	 1.00 0.72 0.10	Somewhat limited Depth to saturated zone	0.75
375B: Rutland	Very limited Low strength Shrink-swell Depth to saturated zone Frost action	 1.00 1.00 0.75 0.50	 Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.55 0.10	 Somewhat limited Depth to saturated zone 	 0.75
375B2: Rutland	 Very limited Low strength Shrink-swell Depth to saturated zone Frost action	 1.00 1.00 0.75 	 Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.55 0.10	 Somewhat limited Depth to saturated zone 	 0.75
388B: Wenona	 Very limited Low strength Shrink-swell Frost action	 1.00 1.00 0.50	 Somewhat limited Depth to saturated zone Too clayey Cutbanks cave	 0.99 0.50 0.10	 Not limited 	
388B2: Wenona	 Very limited Low strength Shrink-swell Frost action	 1.00 1.00 0.50	saturated zone	 0.99 0.50 0.10	 Not limited 	
388C2: Wenona	Very limited Low strength Shrink-swell Frost action	 1.00 1.00 0.50	: -	 0.99 0.50 0.10	 Not limited 	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		 Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		ļ.		<u> </u>		Ţ
397F: Boone	 Very limited		 Very limited	l I	 Very limited	
200110	Slope	1.00	Slope	1.00	Slope	1.00
	<u> </u>	i	Cutbanks cave	1.00	Droughty	1.00
	 		Depth to soft bedrock	0.95 	Depth to bedrock	0.95
413B:	 					
	 Very limited	İ	 Very limited		 Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Depth to bedrock	0.03
	Low strength	1.00 	Depth to soft bedrock	0.03	 	
413C2:	 				 	
	 Very limited	i	 Very limited	İ	Somewhat limited	i
	Frost action	1.00	Cutbanks cave	1.00	Depth to bedrock	0.01
	Low strength	1.00 	Depth to soft bedrock	0.01	 	
435A:	 					
	 Very limited	i	 Very limited	i	 Very limited	i
	Depth to	1.00	_	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Too clayey	0.82		
	Shrink-swell Ponding	1.00	Cutbanks cave	0.10		
448B:	 				 	
Mona	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to	0.99		
	Shrink-swell	0.50	saturated zone			
	Frost action	0.50	Dense layer Too clayey	0.50	 	
	 		Cutbanks cave	0.12		
448C2:	 					
Mona	Very limited	İ	Somewhat limited	ĺ	Not limited	
	Low strength	1.00	Depth to	0.99		
	Shrink-swell	0.50	saturated zone			
	Frost action	0.50	Dense layer	0.50	l I	
	 		Too clayey Cutbanks cave	0.12		
512B:	[[[
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	-	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Dense layer Cutbanks cave	0.50		
512C2:	 				 	
Danabrook	Very limited	i	Somewhat limited	İ	 Not limited	i
	Frost action	1.00	Depth to	0.99		
	Low strength	1.00	saturated zone	ļ		
	Shrink-swell	0.50	-	0.50		
	I	1	Cutbanks cave	0.10		1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		 Shallow excavati 	Shallow excavations		 Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
516A:	 	 	 				
Faxon	Very limited Depth to saturated zone	1.00	Very limited Depth to hard bedrock	1.00	Very limited Depth to saturated zone	1.00	
	Frost action	1.00	Depth to	1.00	Ponding	1.00	
	Low strength	1.00	saturated zone		Depth to bedrock		
	Ponding	1.00	Ponding	1.00			
	Depth to hard bedrock	0.06		0.10		į į	
527C2:	 		[[[[
Kidami	Very limited	i	Somewhat limited	i	Not limited	i	
	Low strength	1.00	!	0.99		i	
	Shrink-swell	0.50	saturated zone	i		i	
	Frost action	0.50	Dense layer	0.50		İ	
	 -	İ	Cutbanks cave	0.10	 	İ	
527D2:	 Very limited				 Somewhat limited	į	
Kidami	: -	1.00	Somewhat limited Depth to	0.99		0.04	
	Low strength Shrink-swell	0.50	saturated zone	10.99	slope	10.04	
	Frost action	0.50	Dense layer	0.50		1	
	Slope	0.04	Cutbanks cave	0.10	I 	i	
			Slope	0.04		į	
530B:	 		 		 		
Ozaukee	Very limited		Somewhat limited		Not limited		
	Low strength	1.00		0.99			
	Shrink-swell	0.50	saturated zone	!		!	
	Frost action	0.50	Dense layer	0.50		!	
	 		Cutbanks cave	0.10			
530C2: Ozaukee	 	İ	 Very limited	İ	 Somewhat limited	İ	
ozdanee	Low strength	1.00		1.00	Depth to	0.08	
	Frost action	0.50	: -		saturated zone		
	Depth to	0.08	Dense layer	0.50		i	
	saturated zone	į	Cutbanks cave	0.10		į	
530C3:							
Ozaukee	Very limited		Somewhat limited		Not limited	!	
	Low strength	1.00		0.99		!	
	Frost action	0.50	saturated zone			!	
	 		Dense layer Cutbanks cave	0.50 0.10	 		
530D2:	 		 		 		
Ozaukee	Very limited	İ	Very limited	İ	Somewhat limited	İ	
	Low strength	1.00	Depth to	1.00	Depth to	0.08	
	Frost action	0.50	saturated zone		saturated zone		
	Depth to	0.08	Dense layer	0.50	Slope	0.04	
	saturated zone		Cutbanks cave	0.10			
	Slope	0.04	Slope	0.04			

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an streets	ıd	Shallow excavati	ons	Lawns and landscaping 	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features		limiting features	
F30D3						
530D3:	 Town limited		 Tom: limited		 Somewhat limited	
Ozaukee	Low strength	1.00	Very limited Depth to	1.00		0.19
	Frost action	0.50	: -	1	saturated zone	0.15
	Depth to	0.19	!	0.50	Slope	0.04
	saturated zone		Cutbanks cave	0.10		
	Slope	0.04	Slope	0.04		i
		İ		İ		
530E2:						
Ozaukee	Very limited		Very limited		Very limited	
	Low strength	1.00	: -	1.00	:	1.00
	Slope	1.00	saturated zone		Depth to	0.08
	Shrink-swell	0.50	· -	1.00	saturated zone	
	Frost action	0.50 0.08	· -	0.50	 	
	Depth to saturated zone	10.00	Cutbanks cave	10.10	 	I
	sacuraced zone	i	 		 	i i
530F:		i	! 	i	! 	
Ozaukee	 Very limited	i	 Very limited	i	 Very limited	i
	Slope	1.00	: -	1.00	Slope	1.00
	Low strength	1.00	Depth to	0.99		
	Shrink-swell	0.50	saturated zone			
	Frost action	0.50	· -	0.50		
			Cutbanks cave	0.10		
541D						
541B: Graymont	 Town limited		 Somewhat limited		 Not limited	
Graymont	Frost action	1.00	!	0.99	NOC IIMICEG	I
	Low strength	1.00		0.55		i
	Shrink-swell	0.50	Cutbanks cave	0.10		i
		i		i		i
541B2:			İ	İ		
Graymont	Very limited		Somewhat limited		Not limited	
	Frost action	1.00		0.99		
	Low strength	1.00	!			
	Shrink-swell	0.50	Cutbanks cave	0.10		
541C2:	 		 		 	
Graymont	 Verv limited	i	 Very limited		 Not limited	i i
	Frost action	1.00	: -	0.99		i
	Low strength	1.00	saturated zone	i		i
	Shrink-swell	0.50	Cutbanks cave	0.10		
542A:	!				!	
Rooks		1	Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength Depth to	1.00 0.75	saturated zone Cutbanks cave	0.10	saturated zone	
	saturated zone	0.75	Cutbanks cave	10.10	 	I
	Shrink-swell	0.50	! 	i	! 	i
				i		i
542B:	į	i		i		i
Rooks	Very limited	İ	 Very limited	İ	Somewhat limited	İ
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	0.10	[
	saturated zone			[
	Shrink-swell	0.50				

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping 	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u>i</u>	limiting features	İ	limiting features	<u>i </u>
540D						
549B: Marseilles	 Very limited		 Somewhat limited		 Not limited	
Maiseilles	Frost action	1.00	!	0.16		
	Low strength	1.00	· -			i
	Shrink-swell	0.50	Cutbanks cave	0.10	İ	į
	!			[!	
549C2:						
Marseilles	Frost action	1.00	Somewhat limited Depth to soft	0.79	Somewhat limited Depth to bedrock	10 80
	Low strength	1.00	bedrock		Depth to Dedlock	0.00
	Shrink-swell	0.50	Cutbanks cave	0.10		i
		İ		İ	ĺ	ĺ
549D2:	!			[
Marseilles	:	!	Somewhat limited	!	Somewhat limited	
	Frost action Low strength	1.00	Slope Depth to soft	0.96 0.71	Slope Depth to bedrock	0.96
	Slope	0.96	: -	0.71	Depth to bedrock	0.71
	Shrink-swell	0.50	Cutbanks cave	0.10		i
	j	į		į	İ	j
549F:	[[
Marseilles	:	:	Very limited	1	Very limited	
	Slope	1.00		1.00	Slope Depth to bedrock	1.00
	Frost action Low strength	1.00	Cutbanks cave Depth to soft	0.10	Depth to bedrock	10.10
	Shrink-swell	0.50	bedrock		 	i
				İ		i
549G:		İ		İ	ĺ	ĺ
Marseilles	:	:	Very limited	:	Very limited	
	Slope	1.00		1.00		1.00
	Frost action Low strength	1.00	Cutbanks cave Depth to soft	0.10	Depth to bedrock	0.10
	Shrink-swell	0.50	bedrock	0.10	 	İ
				i		i
554B:	j	į	İ	į	İ	į
Kernan	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	· -	1.00	Depth to	0.94
	Low strength Shrink-swell	1.00	!	0.59	saturated zone	
	Depth to	0.94	Too clayey Cutbanks cave	0.10	 	
	saturated zone				 	i
	İ	į	İ	İ	İ	j
560D2:	[[
St. Clair			Somewhat limited	1	Somewhat limited	
	Low strength Shrink-swell	1.00	Depth to saturated zone	0.99	Slope	0.04
	Frost action	0.50	Too clayey	0.68	 	
	Slope	0.04	Dense layer	0.50	 	1
	_	i	Cutbanks cave	0.10		i
	[1	Slope	0.04	[1
560E:	 		 		 	
St. Clair	Very limited Low strength	1.00	Very limited Depth to	1.00	Very limited Slope	1.00
	Slope	1.00	saturated zone		Slope Droughty	0.14
	Shrink-swell	0.50	Slope	1.00	Depth to	0.08
	Frost action	0.50	Dense layer	0.50	saturated zone	ĺ
	Depth to	0.08	Too clayey	0.32	[
	saturated zone	1	Cutbanks cave	0.10	i .	1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	d	 Shallow excavati 	ons	Lawns and landscaping 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	İ	İ		İ		İ
567B: Elkhart	 Very limited		 Somewhat limited		 Not limited	
EIRHAIC	Frost action	1.00	Depth to	0.15	NOC IIMICEG	i i
	Low strength	1.00	saturated zone			i
	Shrink-swell	0.50	Cutbanks cave	0.10	İ	j
572A:			 		l	
Loran	 Very limited	i	 Very limited		 Somewhat limited	i i
	Frost action	1.00	: - -	1.00	Depth to	0.75
	Low strength	1.00	saturated zone	į	saturated zone	į
	Depth to	0.75	Cutbanks cave	0.10		
	saturated zone		Too clayey	0.02		ļ
	Shrink-swell	0.50	 			
572B:						
Loran	Very limited		Very limited	1	Somewhat limited	
	Frost action	1.00		1.00	Depth to	0.75
	Low strength	1.00	saturated zone		saturated zone	1
	Depth to saturated zone	0.75	Cutbanks cave	0.10		l
	Shrink-swell	0.50	100 Clayey	0.03	 	İ
				į		İ
572C2:						
Loran	Very limited	1	Very limited	1	Somewhat limited	
	Frost action	1.00		1.00	Depth to	0.75
	Low strength Depth to	1.00 0.75	saturated zone Cutbanks cave	0.10	saturated zone	l I
	saturated zone	0.75	Too clayey	0.10	 	i i
	Shrink-swell	0.50				i
				1		ļ
614A: Chenoa	 Very limited		 Very limited		 Somewhat limited	
Chenoa	Low strength	1.00	Depth to	1.00	Depth to	0.75
	Shrink-swell	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	0.10		i
	saturated zone	İ	İ	Ì	İ	Ì
	Frost action	0.50			1	
614B:	 		 		 	
Chenoa	 Very limited	i	 Very limited	i	Somewhat limited	i
	Low strength	1.00	Depth to	1.00	Depth to	0.75
	Shrink-swell	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	0.10		!
	saturated zone				1	1
	Frost action	0.50	 		 	
662B:	İ	İ		İ		İ
Barony	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		1
	Low strength Shrink-swell	1.00 0.50	Depth to saturated zone	0.99	 	I
	SHITHK-SWELL		sacurated zone		[
663B:	į	i	İ	İ		İ
Clare	-		Somewhat limited	1	Not limited	ļ
	Frost action	1.00	Depth to	0.99		Ţ
	Low strength Shrink-swell	1.00	saturated zone		 	1
	PHILIHY-SMETT	0.50	Cutbanks cave	0.10	I	1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	đ	Shallow excavati	ons	Lawns and landsca	aping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		İ		İ		İ
667B:	 				 	
Kaneville	Frost action	1.00	Very limited Cutbanks cave	1.00	Not limited	
	Low strength	1.00	!	0.99	 	1
	Shrink-swell	0.50	saturated zone	0.33		
						i
668B:	İ	İ		ĺ		Ì
Somonauk	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	-	0.99		
	Shrink-swell	0.50	saturated zone			
575B:	 		 	l I	 	
Greenbush	 Very limited		 Somewhat limited		Not limited	
	Frost action	1.00		0.15		i
	Low strength	1.00	saturated zone	i		i
	Shrink-swell	0.50	Cutbanks cave	0.10		Ì
	!					
575C2:			 	ļ		
Greenbush		1	Somewhat limited	!	Not limited	
	Frost action	1	Depth to saturated zone	0.15	l I	
	Low strength Shrink-swell	1.00		0.10	 	l i
	SHITHK-SWEIT	0.30	Cuchanks cave	0.10	 	i i
579B:		İ		İ		İ
Blackberry	Very limited	į	Somewhat limited	į	Not limited	İ
	Frost action	1.00	Depth to	0.99		ĺ
	Low strength	1.00	saturated zone			
	Shrink-swell	0.50	Cutbanks cave	0.10		
			l		 	
80B: Campton	 Vorus limited		 Very limited	1	 Not limited	l I
Campton	Frost action	1.00	-	1.00	NOC IIMICEG	1
	Low strength	1.00	!	0.99		
	Shrink-swell	0.50	saturated zone			i
	İ	į		į		j
712A:	[[
Spaulding	: -	1	Very limited	1	Very limited	
	Depth to	1.00	-	1.00	-	1.00
	saturated zone	1.00	saturated zone Ponding	1.00	saturated zone Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10	Policing	1
	Ponding	1.00	cacbanks cave		 	İ
	Shrink-swell	0.50		İ		İ
	İ	į		į		j
715A:	[[
Arrowsmith		:	Very limited	1	Somewhat limited	
	Frost action	1.00	-	1.00	Depth to	0.75
	Low strength	1.00	!		saturated zone	
	Depth to saturated zone	0.75	Cutbanks cave	0.10	 	l I
	Shrink-swell	0.50		1	 	
	Surim Swell				 	1
732A:	İ	į		į		ĺ
Appleriver	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	0.10		
	saturated zone			ļ		ļ
	Shrink-swell	0.50	1	1	1	1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
F20D						
732B: Appleriver	 Very limited	I	 Very limited		 Somewhat limited	
1.pp1011101	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	1.00	saturated zone	į	saturated zone	į
	Depth to	0.75	Cutbanks cave	0.10		
	saturated zone Shrink-swell	 0.50	Too clayey 	0.03	 	
791A:	į	į	 	į	 	į
Rush	 Very limited		 Very limited		 Not limited	
	Frost action	1.00	Cutbanks cave	1.00		i
	Low strength	1.00	İ	į	İ	į
	Shrink-swell	0.50	 			
791B:						
Rush	Very limited		Very limited	!	Not limited	
	Frost action Low strength	1.00 1.00	Cutbanks cave	1.00	 	1
	Shrink-swell	0.50				
792A:			 		 	
Bowes	Very limited	j	Very limited	İ	Not limited	į
	Frost action	1.00	Cutbanks cave	1.00	[
	Low strength Shrink-swell	1.00 0.50			 	
792B:	į	į	 -	į		
	 Very limited	1	 Very limited		 Not limited	1
	Frost action	1.00	Cutbanks cave	1.00		i
	Low strength	1.00	İ	į	İ	į
	Shrink-swell	0.50	 			
794G:						
Marseilles	-	1	Very limited	1	Very limited	
	Slope Frost action	1.00 1.00	Slope Cutbanks cave	1.00	Slope Depth to bedrock	1.00
	Low strength	1.00	Depth to soft	0.10	Depth to bedrock	10.10
	Shrink-swell	0.50	bedrock			į
Northfield	 Very limited		 Very limited		 Very limited	
	Depth to hard	1.00	Depth to hard	1.00	Slope	1.00
	bedrock		bedrock		Depth to bedrock	i
	Slope Frost action	1.00 0.50	Slope Cutbanks cave	1.00 0.10	Droughty 	0.53
Ritchey	 Very limited		 Very limited		 Very limited	
	Depth to hard	1.00	Depth to hard	1.00	Slope	1.00
	bedrock	İ	bedrock	į	Depth to bedrock	1.00
	Slope	1.00	Slope	1.00	Droughty	0.12
	Low strength Frost action	1.00 0.50	Cutbanks cave	0.10	 	
802B:	 -	į	: 	İ	: 	
Orthents, loamy	Somewhat limited	i	 Somewhat limited	İ	 Not limited	i
	Shrink-swell	0.50	Depth to	0.47		i
	Frost action	0.50	saturated zone	İ		į
	Low strength	0.22	Cutbanks cave	0.10		
	i	İ	İ	İ	İ	j

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	Local roads and Shallow excavations Lawns and landscapin streets			ping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802D:	 					
Orthents, loamy	 Somewhat limited		 Somewhat limited		 Somewhat limited	i
•	Shrink-swell	0.50	Depth to	0.47	Slope	0.04
	Frost action	0.50	saturated zone			
	Low strength	0.22	Cutbanks cave	0.10		!
	Slope	0.04	Slope	0.04	 	
804D:						
Orthents, acid	Very limited		Somewhat limited		Very limited	
	Low strength	1.00	Depth to	0.47	Too clayey	1.00
	Shrink-swell	0.50	saturated zone		Slope	0.01
	Frost action Slope	0.50	Cutbanks cave	0.10	 	1
	Blobe		Blobe		 	i
804G:		j	İ	İ	İ	j
Orthents, acid	-		Very limited	:	Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength Shrink-swell	1.00	Depth to saturated zone	0.47	Too clayey	1.00
	Frost action	0.50	Cutbanks cave	0.10	 	i
						i
805B:				ļ	!	ļ
Orthents, clayey	-		Somewhat limited	1	Very limited	
	Low strength	1.00	Depth to	0.99	Too clayey Droughty	1.00
	Shrink-swell Frost action	1.00	saturated zone Too clayey	0.32	Droughty	0.48
	Flost action		Cutbanks cave	0.10	 	
814A: Muscatune	 Very limited		 Very limited		 Somewhat limited	
Musca cune	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	1.00	saturated zone		saturated zone	
	Depth to	0.75	Cutbanks cave	0.10	İ	į
	saturated zone	1		[[1
	Shrink-swell	0.50	l		 	
Buckhart	 Very limited		 Somewhat limited		 Not limited	i
	Frost action	1.00	Depth to	0.99	İ	į
	Low strength	1.00	saturated zone			
	Shrink-swell	0.50	Cutbanks cave	0.10		
817A:			 		 	
Channahon	Somewhat limited	i	 Very limited	İ	 Very limited	i
	Depth to soft	1.00		1.00		1.00
	bedrock		bedrock		Droughty	0.65
	Frost action	0.50	Cutbanks cave	0.10	 	
Hesch	 Somewhat limited		 Very limited		 Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.29
		į	Depth to soft	0.29	İ	İ
			bedrock			
817B:	 		 		 	1
Channahon	 Somewhat limited		 Very limited		 Very limited	
	Depth to soft	1.00	Depth to soft	1.00	Depth to bedrock	1.00
	bedrock		bedrock		Droughty	0.91
	Frost action	0.50	Cutbanks cave			

Table 17b.--Building Site Development--Continued

Map symbol and soil name	 Local roads an streets 	d	 Shallow excavati 	ons	Lawns and landscaping 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
817B: Hesch	 Somewhat limited Frost action 	 0.50 	 Somewhat limited Depth to soft bedrock Cutbanks cave	 0.95 0.10	 Somewhat limited Depth to bedrock Droughty	 0.95 0.05	
818A: Flanagan	 Very limited Frost action Low strength Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 0.75	saturated zone	 1.00 0.10	 Somewhat limited Depth to saturated zone 	 0.75 	
Catlin	 Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	saturated zone	 0.99 0.10	 Not limited 		
820E: Hennepin	 Very limited Slope Low strength Frost action	 1.00 0.78 0.50		 1.00 0.10	 Very limited Slope 	1.00	
Casco	 Very limited Slope Frost action	 1.00 0.50	!	 1.00 1.00	 Very limited Slope 	1.00	
820G: Hennepin	 Very limited Slope Low strength Frost action	 1.00 0.78 0.50		 1.00 0.10	 Very limited Slope 	1.00	
Casco	 Very limited Slope Frost action	 1.00 0.50	_	 1.00 1.00		 1.00 0.17	
830: Landfills	 Not rated 	 	 Not rated	 	 Not rated	 	
864: Pits, quarry	 Not rated		 Not rated	 	 Not rated		
865: Pits, gravel	 Not rated 		 Not rated 	 	 Not rated 		
969E2: Casco	 Very limited Slope Frost action	 1.00 0.50	 Very limited Cutbanks cave Slope	 1.00 1.00	 Very limited Slope Droughty	1.00	
Rodman	 Very limited Slope 	 1.00 	 Very limited Cutbanks cave Slope 	 1.00 1.00 	 Very limited Slope Droughty Gravel content	 1.00 0.99 0.02	

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		 Shallow excavati 	ons	 Lawns and landsca 	aping
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
969F:						
Casco	Very limited	İ	Very limited	İ	Very limited	İ
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.34
Rodman	 Very limited	l I	 Very limited		 Very limited	
	Slope	1.00	Slope	1.00	: -	1.00
		İ	Cutbanks cave	1.00	Droughty	0.94
					Gravel content	0.02
1103A:		I	 		 	
Houghton	Very limited	i	 Very limited	İ	 Very limited	i
	Ponding	1.00	Ponding	1.00	Organic matter	1.00
	Depth to	1.00	Depth to	1.00	content	
	saturated zone Subsidence	1 00	saturated zone		Depth to	1.00
	Frost action	1.00	Organic matter	1.00	saturated zone Ponding	1.00
				İ		
1480A:		Ì	İ	İ	İ	İ
Moundprairie	:		Very limited	:	Very limited	
	Ponding Depth to	1.00	Ponding Depth to	1.00	Ponding Flooding	1.00
	saturated zone	1	saturated zone	1	Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10	İ	İ
	Low strength	1.00				
3073A:			 		 	
Ross	Very limited	i	Somewhat limited	İ	 Very limited	İ
	Flooding	1.00	Flooding	0.80	Flooding	1.00
	Low strength	1.00	Depth to	0.16		ļ
	Frost action	0.50	saturated zone Cutbanks cave	0.10	 	
			cutbanks cave		 	
3076A:		İ		į	İ	į
Otter	Very limited		Very limited	[Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1	Depth to saturated zone	1	Flooding Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10	İ	İ
	Low strength	1.00				
3082A:			 		 	
Millington	Very limited	i	 Very limited	İ	 Very limited	İ
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Ponding	1.00	•	
	Flooding Low strength	1.00	Flooding Cutbanks cave	0.80	Ponding	1.00
	Ponding	1.00	Cutbanks cave		 	i
				İ		į
3107A:	 Tom: limit:		 		 	
Sawmill	Depth to	1.00	Very limited Depth to	1.00	Very limited Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Ponding	1.00	saturated zone	i
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				1

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads an	d	 Shallow excavati 	ons	 Lawns and landsca 	ping
	Rating class and	Value	Rating class and	Value	Rating class and limiting features	Value
3321A: Du Page		 1.00 0.50	 Somewhat limited Flooding Depth to saturated zone	 0.80 0.15	 	1.00
3451A: Lawson	 Very limited Frost action Flooding Low strength Depth to saturated zone	 1.00 1.00 1.00 0.75	Cutbanks cave Very limited Depth to saturated zone Flooding Cutbanks cave	0.10 1.00 0.80 0.10	 - Very limited Flooding Depth to saturated zone	 1.00 0.75
3480A: Moundprairie	 Very limited Depth to saturated zone Frost action Flooding Low strength Ponding	 1.00 1.00 1.00 1.00	saturated zone Ponding Flooding	 1.00 1.00 0.80 0.10	Depth to saturated zone	 1.00 1.00 1.00
3800A: Psamments	 Very limited Flooding 	 1.00 	 Very limited Cutbanks cave Flooding Depth to saturated zone	 1.00 0.80 0.15	Droughty	 1.00 0.69 0.50
7073A: Ross	 Very limited Low strength Frost action Flooding	 1.00 0.50 0.40	 Very limited Cutbanks cave Depth to saturated zone	 1.00 0.15 	 Not limited 	
8073A: Ross	 Very limited Flooding Frost action Low strength	 1.00 0.50 0.22	Somewhat limited Flooding Depth to saturated zone Cutbanks cave	 0.60 0.15 0.10	 Somewhat limited Flooding 	0.60
8107A: Sawmill	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00	 Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	 1.00 1.00 0.60 0.10		 1.00 1.00 0.60
8151A: Ridgeville	 Very limited Flooding Depth to saturated zone Frost action	 1.00 0.75 0.50	 Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.60	 Somewhat limited Depth to saturated zone Flooding	0.75

Table 17b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets	ıd	Shallow excavati	ons	Lawns and landsca	ping
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>
8404A:						
Titus	 Very limited	i	Very limited	i	Very limited	i
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone	i	saturated zone	i	saturated zone	i
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		i
	Shrink-swell	1.00		į		į
8451A:						
Lawson	Very limited	İ	Very limited	İ	Somewhat limited	İ
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Flooding	1.00	saturated zone	İ	saturated zone	ĺ
	Low strength	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
8516A:						
Faxon	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to hard bedrock	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Depth to	1.00	Ponding	1.00
	Flooding	1.00	saturated zone	i	Flooding	0.60
	Low strength	1.00	Ponding	1.00	Depth to bedrock	0.06
	Ponding	1.00	Flooding	0.60	· -	İ
	Ī	İ	Cutbanks cave	0.10		İ

Table 18a.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Septic absorptio		ds	Sewage lagoons		
	Rating class		Value	Rating class and		
23B: Blount	Very limited Slow water movement Depth to	zone	 1.00 1.00	Very limited Depth to saturated zone Slope	 1.00 0.08	
51A: Muscatune	Very limited Depth to saturated Slow water movement	zone	 1.00 0.46	Very limited Depth to saturated zone Seepage	1.00	
60C2: La Rose	 Very limited Slow water movement		 1.00 	Very limited Slope Seepage	 1.00 0.53	
60D2: La Rose	 Very limited Slow water movement Slope		 1.00 0.96	Very limited Slope Seepage	 1.00 0.53	
61A: Atterberry	 Very limited Depth to saturated Slow water movement	zone	 1.00 0.46	Very limited Depth to saturated zone Seepage	 1.00 - 0.53	
61B: Atterberry	 Very limited Depth to saturated Slow water movement	zone	 1.00 0.46	Very limited Depth to saturated zone Seepage Slope	 1.00 - 0.53 0.18	
67A: Harpster	 Very limited Ponding Depth to saturated Slow water movement	zone	 1.00 1.00 0.46	Very limited Ponding Depth to saturated zone Seepage	 1.00 1.00 0.53	
68A: Sable	 Very limited Depth to saturated Ponding Slow water movement	zone	 1.00 1.00 0.46	Very limited Depth to saturated zone Ponding Seepage	 1.00 1.00 0.53	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and	Value	Rating class and limiting features	Value	
86B: Osco	 Somewhat limited Slow water movement Depth to saturated zone	 0.46 0.40	 Somewhat limited Seepage Slope 	 0.53 0.18 	
86C2: Osco	 Somewhat limited Slow water movement Depth to saturated zone	 0.46 0.40	 Very limited Slope Seepage 	 1.00 0.53 	
87A: Dickinson	 Very limited Seepage, bottom layer	 1.00	 Very limited Seepage	 1.00	
87B: Dickinson	 Very limited Seepage, bottom layer	 1.00	 Very limited Seepage Slope	 1.00 0.18	
87C2: Dickinson	 Very limited Seepage, bottom layer	 1.00	 Very limited Seepage Slope	 1.00 1.00	
88B: Sparta	 Very limited Filtering capacity Seepage, bottom layer	 1.00 1.00	 Very limited Seepage Slope 	 1.00 0.18 	
88D: Sparta	 Very limited Filtering capacity Seepage, bottom layer Slope	 1.00 1.00 0.04	 Very limited Seepage Slope 	 1.00 1.00 	
91A: Swygert	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	
91B: Swygert	Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.08	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	.ds	Sewage lagoons 	3
	Rating class and limiting features		Rating class and limiting features	Value
91B2:	 		 	
Swygert	Very limited Slow water movement	1.00	 Very limited Depth to saturated zone	1.00
	Depth to saturated zone	1.00		0.08
91C2:				
Swygert	Very limited Slow water movement	1.00	 Very limited Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Slope	0.68
91C3:				
Swygert	Very limited Slow water movement	1.00	 Very limited Depth to saturated zone	1.00
	Depth to saturated zone	1.00	1	0.68
103A:			 	
Houghton	Depth to	1.00		1.00
	saturated zone Subsidence Seepage, bottom	 1.00 1.00	content Depth to saturated zone	1.00
	layer Ponding	1.00	Seepage Ponding	1.00
104A:			 	
Virgil	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	0.46	 	
105A:				
Batavia	Seepage, bottom layer	1.00	Very limited Seepage 	1.00
	Slow water movement	0.46		į Į
105B:			 	
Batavia	Very limited Seepage, bottom layer	1	Very limited Seepage Slope	 1.00 0.32
	Slow water movement	0.46	b10pe 	
105C2:	 		 	
Batavia		1	 Very limited	
	Seepage, bottom layer Slow water	1.00 0.46	Slope Seepage 	1.00
	movement			
	Slope	0.01	 	1

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and	Value	Rating class and limiting features	Value	
125A: Selma	Very limited Depth to saturated zone Seepage, bottom layer Ponding Slow water movement	 1.00 1.00 1.00 0.46	 Very limited Seepage Depth to saturated zone Ponding	 1.00 1.00 1.00 	
131B: Alvin	 Very limited Seepage, bottom layer	 1.00 	 Very limited Seepage Slope	 1.00 0.18	
131C2: Alvin	! -	 1.00 	 Very limited Seepage Slope	 1.00 1.00	
132A: Starks	Very limited Depth to saturated zone Seepage, bottom layer Slow water movement	 1.00 1.00 0.46	 Very limited Depth to saturated zone Seepage	 1.00 1.00 	
134A: Camden	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage 	 1.00 	
134B: Camden	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage Slope 	 1.00 0.18 	
134C2: Camden	 Very limited Seepage, bottom layer Slow water movement	 	 Very limited Seepage Slope 	 1.00 1.00	
134D2: Camden	! -	 1.00 0.96 0.46	 Very limited Slope Seepage 	 1.00 1.00 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel	.ds	 Sewage lagoons 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
134D3: Camden	Very limited Seepage, bottom layer Slope Slow water movement		 Very limited Slope Seepage 	 1.00 1.00 	
134F: Camden	 Very limited Slope Seepage, bottom layer Slow water movement	 1.00 1.00 0.46	 Very limited Slope Seepage 	 1.00 1.00 	
146A: Elliott	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	
146B: Elliott	 Very limited Slow water movement Depth to saturated zone	1.00	saturated zone	 1.00 0.53 0.08	
146B2: Elliott	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.08	
147B2: Clarence	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.08	
148A: Proctor	 Very limited Seepage, bottom layer Slow water movement		 Very limited Seepage 	 1.00 	
148B: Proctor	 Very limited Seepage, bottom layer Slow water movement	1	 Very limited Seepage Slope 	 1.00 0.18 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel 	ds	Sewage lagoons		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
148C2: Proctor	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Slope Seepage	 1.00 1.00	
149A: Brenton	Very limited Depth to saturated zone Seepage, bottom layer Slow water movement	 1.00 1.00 0.46	 Very limited Depth to saturated zone Seepage	 1.00 1.00 	
151A: Ridgeville	 Very limited Depth to saturated zone Seepage, bottom layer	 1.00 1.00 	 Very limited Seepage Depth to saturated zone	 1.00 1.00 	
151B: Ridgeville	Very limited Depth to saturated zone Seepage, bottom layer	 1.00 1.00	 Very limited Seepage saturated zone Slope	 1.00 0.08	
152A: Drummer	Very limited Depth to saturated zone Seepage, bottom layer Ponding Slow water movement	 1.00 1.00 1.00 0.46	 Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	
154A: Flanagan	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Depth to saturated zone Seepage	 1.00 0.53	
171A: Catlin	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 0.53	
171B: Catlin	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.08	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and limiting features	1	Rating class and limiting features	Value	
171B2: Catlin	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.08	
171C2: Catlin	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 1.00 0.53	
171C3: Catlin	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Depth to saturated zone Slope Seepage	 1.00 1.00 0.53	
193C2: Mayville	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	Seepage	 1.00 0.53 0.04	
198A: Elburn	Very limited Depth to saturated zone Seepage, bottom layer Slow water movement	 1.00 1.00 0.46	Depth to	 1.00 1.00 	
199A: Plano	 Very limited Seepage, bottom layer Slow water movement	1	 Very limited Seepage 		
199B: Plano	 Very limited Seepage, bottom layer Slow water movement	1	 Very limited Seepage Slope 	 1.00 0.18 	
199C2: Plano	 Very limited Seepage, bottom layer Slow water movement	1	 Very limited Seepage Slope 	 1.00 1.00 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 	1
	Rating class and limiting features	Value	Rating class and limiting features	Value
206A:				
Thorp	Very limited	į	Very limited	İ
	Slow water	1.00	Ponding	1.00
	movement		Depth to	1.00
	Ponding	1.00	saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00		
210A:				
Lena	Very limited	į	Very limited	j
	Depth to	1.00	Organic matter	1.00
	saturated zone		content	
	Subsidence	1.00	Seepage	1.00
	Seepage, bottom layer	1	Depth to saturated zone	1
	Ponding	1.00	Ponding	1.00
219A:				
Millbrook	 Very limited	İ	 Very limited	İ
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Seepage, bottom	1.00	Seepage	1.00
	layer Slow water	0.46	 	
	movement			
223B:				
Varna	Very limited	į	Somewhat limited	j
	Slow water	1.00	Slope	0.08
	movement		Depth to	0.04
	Depth to saturated zone	1.00	saturated zone	
		į		
223B2: Varna	 Town limited		Somewhat limited	
varna	Very limited Slow water	1.00	Slope	0.08
	movement		Depth to	0.04
	Depth to	1.00	saturated zone	į
	saturated zone		 	
223C2:				
Varna		'	Somewhat limited	
	Slow water	1.00	Slope	0.68
	movement		Depth to	0.04
	Depth to saturated zone	1.00	saturated zone	
223C3:			 	
Z23C3: Varna	 Very limited		 Somewhat limited	
	Slow water	1.00	Slope	0.68
	movement		Depth to	0.04
	Depth to	1.00	saturated zone	
	saturated zone			

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fie:			
	Rating class and limiting features	Value	Rating class and limiting features	Value
223D2: Varna	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.04
223D3: Varna	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 0.04	Very limited Slope Depth to saturated zone	 1.00 0.04
228B: Nappanee	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.08
228C2: Nappanee	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.68
228C3: Nappanee	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.68
232A: Ashkum	 Very limited Depth to saturated zone Slow water movement Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00
233A: Birkbeck	Very limited Depth to saturated zone Slow water movement	1.00	Depth to	 0.53 0.19
233B: Birkbeck	 Very limited Depth to saturated zone Slow water movement	1.00	 Somewhat limited Seepage Depth to saturated zone Slope	 0.53 0.19 0.18

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic absorption		is	Sewage lagoons 	•
	Rating class			Rating class and limiting features	Value
233C2: Birkbeck	 Very limited Depth to saturated : Slow water movement	zone	 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	 1.00 0.53 0.19
234A: Sunbury	 Very limited Depth to saturated : Slow water movement	zone	 1.00 1.00	 Very limited Depth to saturated zone Seepage	 1.00 0.53
235A: Bryce	 Very limited Slow water movement Depth to saturated 2 Ponding		 1.00 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00
236A: Sabina	Very limited Depth to saturated Slow water movement		 1.00 1.00	 Very limited Depth to saturated zone Seepage	 1.00 0.53
238A: Rantoul	 Very limited Slow water movement Depth to saturated 2 Ponding	zone	 1.00 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00
241C3: Chatsworth	Very limited Slow water movement Depth to saturated 2	zone	 1.00 1.00	Somewhat limited Slope Depth to saturated zone	 0.68 0.56
241D3: Chatsworth	Very limited Slow water movement Depth to saturated 2 Slope	zone	 1.00 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.56
241E3: Chatsworth	Very limited Slow water movement Depth to saturated 2	zone	 1.00 1.00 	 Very limited Slope Depth to saturated zone	 1.00 0.56

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel	ds	 Sewage lagoons 	
	Rating class and limiting features	Value	Rating class and limiting features	Value
241F: Chatsworth	Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 1.00	 Very limited Slope Depth to saturated zone	 1.00 0.56
241G: Chatsworth	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 1.00	 Very limited Slope Depth to saturated zone	 1.00 0.56
242A: Kendall	Very limited Depth to saturated zone Slow water movement	 1.00 0.46	 Very limited Depth to saturated zone Seepage	 1.00 0.53
243A: St. Charles	 Somewhat limited Slow water movement	 0.46 	 Somewhat limited Seepage 	0.53
243B: St. Charles	 Somewhat limited Slow water movement	 0.46 	 Somewhat limited Seepage Slope	 0.53 0.18
243C2: St. Charles	 Somewhat limited Slow water movement	 0.46 	 Very limited Slope Seepage	 1.00 0.53
244A: Hartsburg	Very limited Ponding Depth to saturated zone Slow water movement	 1.00 1.00 0.46	 Very limited Ponding Depth to saturated zone Seepage	 1.00 1.00 0.53
278A: Stronghurst	 Very limited Depth to saturated zone Slow water movement	 1.00 0.46	 Very limited Depth to saturated zone Seepage	 1.00 0.53
278B: Stronghurst	 Very limited Depth to saturated zone Slow water movement	 1.00 0.46	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.18

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 	
	Rating class and limiting features	Value	Rating class and limiting features	Value
279B: Rozetta	 Somewhat limited Slow water movement Depth to saturated zone	 0.46 0.40	 Somewhat limited Seepage Slope 	 0.53 0.18
280C2: Fayette	 Somewhat limited Slow water movement	 0.46 	 Very limited Slope Seepage	 1.00 0.53
290A: Warsaw	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage 	 1.00
290B: Warsaw	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage Slope 	 1.00 0.08
290C2: Warsaw	 Very limited Seepage, bottom layer Slow water movement	 	 Very limited Seepage Slope 	
293A: Andres	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Seepage	 1.00 0.53
293B: Andres	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.18
294B: Symerton	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Somewhat limited Seepage Slope Depth to saturated zone	 0.53 0.18 0.01
294C2: Symerton	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Slope Seepage Depth to saturated zone	 1.00 0.53 0.12

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	.ds	Sewage lagoons	s	
	Rating class and limiting features	Value	Rating class and limiting features	Value	
295A: Mokena	 Very limited Slow water	 1.00	 Very limited Depth to	 1.00	
	movement Depth to saturated zone	1.00	saturated zone Seepage	0.53	
295B: Mokena			 Very limited	 	
	Slow water movement Depth to	1.00 1.00	saturated zone	1.00 0.53	
298B:	saturated zone	İ İ	Slope 	0.08	
Beecher	 Very limited Slow water movement	1.00	 Very limited Depth to saturated zone	1.00	
	Depth to saturated zone	1.00 	Slope 	0.08	
311B: Ritchey	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock Seepage	 1.00 0.53	
314A: Joliet	 Very limited	 	Slope Very limited	0.08	
001160	Depth to bedrock Depth to saturated zone	1	_	 1.00 1.00	
	Ponding 	1.00 	saturated zone Ponding Seepage	 1.00 0.53	
315B: Channahon	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock	 1.00	
	 	 	Seepage Slope 	0.53	
317A: Millsdale	Very limited Depth to saturated zone	 1.00	Very limited Depth to hard bedrock	1.00	
	Slow water movement Depth to bedrock		Depth to saturated zone Ponding	1.00	
318B:	Ponding 	1.00 	Seepage 	0.53	
Lorenzo	Very limited Filtering capacity Seepage, bottom layer	 1.00 1.00	Very limited Seepage Slope 	 1.00 0.08 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
318C2:		ļ		
Lorenzo	Very limited Filtering	1.00	Very limited Seepage	1.00
	capacity	1	Slope	0.68
	Seepage, bottom	1.00		
320B:			1	
	 Very limited		 Very limited	
	Slow water	1.00	Depth to	1.00
	movement	Ì	saturated zone	İ
	Depth to saturated zone	1.00	Slope	0.08
320C2: Frankfort	 Very limited	l I	 Very limited	
riankioi t	Slow water	1.00	Depth to	1.00
	movement	į	saturated zone	į
	Depth to	1.00	Slope	0.68
	saturated zone	 	 	
325B:		į		į
Dresden	Very limited		Very limited	
	Seepage, bottom	1.00	Seepage Slope	1.00
	Slow water	0.46		
	movement			
325C2:	 		 	
Dresden	Very limited		Very limited	
	Seepage, bottom	1.00	Seepage	1.00
	layer Slow water	0.46	Slope 	0.68
	movement			į
327B:	 			
Fox	 Very limited	İ	 Very limited	İ
	Seepage, bottom	1.00	Seepage	1.00
	layer Slow water	0.46	Slope	0.08
	movement			
327C2:	 		 	
Fox	 Very limited		 Very limited	i
	Seepage, bottom	1.00	Seepage	1.00
	layer		Slope	0.68
	Slow water movement	0.46		
		į		į
327D2: Fox	 Very limited		 Very limited	
	Seepage, bottom	1.00	Seepage	1.00
	layer		Slope	1.00
	Slow water	0.46	 	
	movement Slope	0.04	 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		 Sewage lagoons 	1
	Rating class and limiting features	Value	Rating class and limiting features	Value
330A: Peotone	 Very limited Depth to saturated zone Slow water movement Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00
344A: Harvard	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage 	 1.00
344B: Harvard	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage Slope 	 1.00 0.18
344C2: Harvard	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Slope Seepage 	 1.00 1.00
356A: Elpaso	 Very limited Depth to saturated zone Slow water movement Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding Seepage	 1.00 1.00 0.53
375A: Rutland	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00 	 Very limited Depth to saturated zone Seepage	 1.00 0.53
375B: Rutland	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 0.53 0.18
375B2: Rutland	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.18

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 	
	Rating class and limiting features	Value	Rating class and limiting features	Value
388B: Wenona	Very limited Slow water movement Depth to saturated zone	 1.00 1.00	Somewhat limited Seepage Slope Depth to saturated zone	 0.53 0.18 0.04
388B2: Wenona	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Somewhat limited Slope Depth to saturated zone	 0.18 0.04
388C2: Wenona	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Very limited Slope Depth to saturated zone	 1.00 0.04
397F: Boone	 Very limited Slope Seepage, bottom layer Depth to bedrock	 1.00 1.00 1.00	 Very limited Depth to soft bedrock Slope Seepage	 1.00 1.00 1.00
413B: Gale	Very limited Seepage, bottom layer Depth to bedrock Slow water movement	1.00	 Very limited Depth to soft bedrock Seepage Slope	 1.00 1.00 0.08
413C2: Gale	 Very limited Seepage, bottom layer Depth to bedrock Slow water movement	1.00	 Very limited Depth to soft bedrock Seepage Slope	 1.00 1.00 0.68
435A: Streator	 Very limited Slow water movement Depth to saturated zone Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding Seepage	 1.00 1.00 0.53
448B: Mona	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Somewhat limited Slope Depth to saturated zone	 0.18 0.04

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	 Sewage lagoons 	
	Rating class and limiting features	Value	Rating class and limiting features	Value
448C2: Mona	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	Very limited Slope Depth to saturated zone	 1.00 0.04
512B: Danabrook	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	Somewhat limited Seepage Slope Depth to saturated zone	 0.53 0.18 0.04
512C2: Danabrook	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Very limited Slope Seepage Depth to saturated zone	 1.00 0.53 0.04
516A: Faxon	Very limited Depth to saturated zone Depth to bedrock Ponding Slow water movement	 1.00 1.00 1.00 0.46	Very limited Depth to hard bedrock Depth to saturated zone Ponding Seepage	 1.00 1.00 1.00 0.53
527C2: Kidami	Very limited Depth to saturated zone Slow water movement	 1.00 1.00	 Somewhat limited Slope Seepage Depth to saturated zone	 0.68 0.53 0.04
527D2: Kidami	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 0.04	 Very limited Slope Seepage Depth to saturated zone	 1.00 0.53 0.04
530B: Ozaukee	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00 	Depth to	 0.08 0.04
530C2: Ozaukee	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00 	 Somewhat limited Slope Depth to saturated zone	 0.68 0.56

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	.ds	 Sewage lagoons 	1
	Rating class and limiting features	Value	Rating class and limiting features	Value
530C3: Ozaukee	Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Somewhat limited Slope Depth to saturated zone	 0.68 0.08
530D2: Ozaukee		 1.00 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.56
530D3: Ozaukee	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 0.04	 Very limited Slope Depth to saturated zone	 1.00 0.75
530E2: Ozaukee		 1.00 1.00 	 Very limited Slope Depth to saturated zone	 1.00 0.56
530F: Ozaukee	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 	 Very limited Slope Depth to saturated zone	 1.00 0.04
541B: Graymont	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	 Somewhat limited Seepage Slope Depth to saturated zone	 0.53 0.18 0.04
541B2: Graymont	 Very limited Slow water movement Depth to saturated zone	 1.00 1.00	Somewhat limited Seepage Slope Depth to saturated zone	 0.53 0.32 0.04
541C2: Graymont	Very limited Slow water movement Depth to saturated zone	 1.00 1.00 	 Very limited Slope Seepage Depth to saturated zone	 1.00 0.53 0.19

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	 Sewage lagoons 	
	Rating class and	Value		Value
	limiting features	1	limiting features	1
542A:	 		 -	
	 Very limited		 Very limited	
	Slow water	1.00	Depth to	1.00
	movement	i	saturated zone	i
	Depth to	1.00	Seepage	0.53
	saturated zone	İ	İ	İ
		!		
542B:				
Rooks	Very limited Slow water	1.00	Very limited Depth to	1.00
	movement	1	saturated zone	1
	Depth to	1.00	Seepage	0.53
	saturated zone	i	Slope	0.18
	j	İ		İ
549B:		[
Marseilles	: -		Somewhat limited	
	Slow water	1.00	Depth to soft	1.00
	movement Depth to bedrock	1.00	bedrock Seepage	0.53
	Depth to Dedrock	0.43	Slope	0.18
	saturated zone		51090	
	İ	i		i
549C2:				
Marseilles	: -	1	Very limited	1
	Slow water	1.00	Depth to soft	1.00
	movement		bedrock	
	Depth to bedrock	1.00	Slope Seepage	1.00
	 		beepage	
549D2:		i	İ	i
Marseilles	Very limited	İ	Very limited	İ
	Slow water	1.00	Depth to soft	1.00
	movement		bedrock	
	Depth to bedrock	1	Slope	1.00
	Slope	0.96	 	
549F:	 		 	1
	 Very limited	i	 Very limited	i
	Slow water	1.00	Depth to soft	1.00
	movement	1	bedrock	1
	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	 	
549G:	 		 	
Marseilles	 Verv limited		 Very limited	1
	Slow water	1.00	: -	1.00
	movement	į	bedrock	į
	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00		!
EE4D.		1	 	
554B: Kernan	 Very limited		 Very limited	1
	Slow water	1.00	Depth to	1.00
	movement		saturated zone	
	Depth to	1.00	Slope	0.08
	saturated zone			

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
560D2: St. Clair	Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 0.04	Very limited Slope Depth to saturated zone	 1.00 0.04 	
560E: St. Clair	Very limited Slow water movement Depth to saturated zone Slope	 1.00 1.00 1.00	 Very limited Slope Depth to saturated zone	 1.00 0.56 	
567B: Elkhart	Somewhat limited Slow water movement Depth to saturated zone	 0.46 0.40	 Somewhat limited Seepage Slope 	0.53	
572A: Loran	Very limited Slow water movement Depth to saturated zone Depth to bedrock	1.00 1.00	 Very limited Depth to saturated zone Seepage Depth to soft bedrock	 1.00 0.53 0.18	
572B: Loran	Very limited Slow water movement Depth to saturated zone Depth to bedrock	 1.00 1.00 0.73	Very limited Depth to saturated zone Seepage Depth to soft bedrock Slope	 1.00 0.53 0.32 0.18	
572C2: Loran	Very limited Slow water movement Depth to saturated zone Depth to bedrock	 1.00 1.00 0.27	 Very limited Slope Depth to saturated zone Seepage	 1.00 1.00 0.53	
614A: Chenoa	Very limited Slow water movement Depth to saturated zone	 1.00 1.00 	 Very limited Depth to saturated zone 	 1.00 	
614B: Chenoa		 1.00 1.00 	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.18	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 		
	 Rating class and limiting features	Value	Rating class and limiting features	Value	
662B:			 	<u> </u> 	
Barony	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone	1.00	
	Seepage, bottom layer	1.00	Seepage Slope	1.00	
	Slow water movement	0.46 	 	 	
663B: Clare	<u>-</u>		 Very limited		
	Depth to saturated zone Slow water	1.00 0.46	Depth to saturated zone Seepage	1.00 0.53	
	movement	<u> </u> 	Slope	0.32	
667B: Kaneville	 Very limited Depth to	 1.00		1.00	
	saturated zone Seepage, bottom layer	1.00	saturated zone Seepage Slope	1.00	
	Slow water movement	0.46			
668B: Somonauk	 Very limited	1	 Very limited		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00 1.00	
	Seepage, bottom layer Slow water movement	1.00 0.46 	Seepage Slope 	0.18	
675B: Greenbush	 Somewhat limited	 	 Somewhat limited	<u> </u> 	
	Slow water movement Depth to	0.46 0.40	Seepage Slope 	0.53 0.18	
	saturated zone	į Į		į Į	
675C2: Greenbush	 Somewhat limited Slow water	 0.46	 Very limited Slope	1.00	
	movement Depth to saturated zone	 0.40 	Seepage 	0.53	
679B: Blackberry	 Very limited	 	 Very limited		
Diackbelly	Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	
	Slow water movement	0.46	Seepage Slope	0.53	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
680B: Campton	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	
	Seepage, bottom layer Slow water movement	1.00 0.46	Seepage Slope 	1.00 0.18 	
712A:			l		
	 Very limited Depth to saturated zone Ponding Slow water movement	 1.00 1.00 0.46	Very limited Depth to saturated zone Ponding Seepage	 1.00 1.00 0.53	
715A:	 		 		
Arrowsmith	Very limited Depth to saturated zone Slow water	 1.00 0.46	Very limited	 1.00 0.53	
	movement				
732A:	[
Appleriver	Very limited Slow water movement Depth to saturated zone Depth to bedrock	1.00 1.00	Very limited Depth to saturated zone Depth to soft bedrock Seepage	 1.00 0.84 0.53	
732B:]		
Appleriver	Very limited Slow water movement Depth to saturated zone Depth to bedrock	 1.00 1.00 0.36	Very limited Depth to saturated zone Seepage Slope Depth to soft bedrock	 1.00 0.53 0.18 0.01	
791A: Rush	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage 	 1.00 	
701D.					
791B: Rush	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Seepage Slope	 1.00 0.08 	
792A:	 		 		
Bowes	Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage 	1.00	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel 	ds	 Sewage lagoons 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
792B: Bowes	 Very limited Seepage, bottom layer Slow water movement	 1.00 0.46	 Very limited Seepage Slope 	 1.00 0.08	
794G: Marseilles	 Very limited Slow water movement Slope Depth to bedrock	1.00 1.00	 Very limited Depth to soft bedrock Slope	 1.00 1.00	
Northfield	 Very limited Depth to bedrock Slope 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.53	
Ritchey	 Very limited Depth to bedrock Slope 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.53	
802B: Orthents, loamy	 Very limited Slow water movement Depth to saturated zone	 1.00 0.94	 Somewhat limited Slope 	 0.18 	
802D: Orthents, loamy	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 0.94 0.04	 Very limited Slope 	 1.00 	
804D: Orthents, acid	 Very limited Slow water movement Depth to saturated zone Slope	 1.00 0.94 0.01	 Very limited Slope 	 1.00 	
804G: Orthents, acid	 Very limited Slow water movement Slope Depth to saturated zone	 1.00 1.00 0.94	 Very limited Slope 	 1.00 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
	IIMICING TEACUTES	1		1	
805B:		i		İ	
Orthents, clayey	Very limited	İ	Somewhat limited	İ	
	Slow water	1.00	Slope	0.08	
	movement		Depth to	0.04	
	Depth to saturated zone	1.00	saturated zone		
	sacuraced zone		 		
814A:	İ	İ	İ	į	
Muscatune	Very limited	:	Very limited		
	Depth to	1.00	: -	1.00	
	saturated zone		saturated zone		
	Slow water movement	0.46	Seepage 	0.53	
	İ	į	İ	İ	
Buckhart	Very limited		Very limited		
	Depth to	1.00		1.00	
	saturated zone		saturated zone		
	Slow water movement	0.46	Seepage 	0.53	
	İ	į	İ	İ	
817A:	 		 		
Channahon	Very limited	:	Very limited Depth to soft	1 00	
	Depth to bedrock Seepage, bottom	1.00	Depth to soit bedrock	1.00	
	layer		Seepage	1.00	
	İ	İ	İ	į	
Hesch	Very limited		Very limited		
	Seepage, bottom	1.00	: -	1.00	
	layer		bedrock		
	Depth to bedrock		Seepage 	1.00	
817B:		i		<u> </u>	
Channahon	Very limited		Very limited		
	Depth to bedrock	:	Depth to soft	1.00	
	Seepage, bottom	1.00	bedrock		
	layer		Seepage Slope	1.00	
Hesch	Very limited	į	Very limited	j	
	Depth to bedrock	1.00	Depth to soft	1.00	
	Seepage, bottom	1.00	bedrock		
	layer		Seepage	1.00	
	 		Slope	0.32	
818A:	 				
Flanagan	Very limited	į	Very limited	j	
	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		
	Slow water movement	1.00	Seepage	0.53	
	movement		 		
Catlin	Very limited	İ	 Very limited	İ	
	Depth to	1.00		1.00	
	saturated zone		saturated zone		
	Slow water movement	1.00	Seepage	0.53	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel 	ds	Sewage lagoons 		
	Rating class and limiting features	Value	Rating class and limiting features	Value	
820E: Hennepin	 Very limited Slow water movement Slope	 1.00 1.00	 Very limited Slope Seepage	 1.00 0.53	
Casco	 Very limited Filtering capacity Seepage, bottom layer Slope	 1.00 1.00 1.00	 Very limited Slope Seepage 	 1.00 1.00 	
820G: Hennepin	 Very limited Slope Slow water movement	 1.00 1.00	 Very limited Slope Seepage 	 1.00 0.53	
Casco	Very limited Filtering capacity Slope Seepage, bottom layer	 1.00 1.00 1.00	Very limited Slope Seepage 	 1.00 1.00 	
830: Landfills	 Not rated 	 	 Not rated 		
864: Pits, quarry 865:	 Not rated 		 Not rated 		
Pits, gravel	 Not rated 	 	 Not rated 	 	
969E2: Casco	 Very limited Filtering capacity Seepage, bottom layer Slope	 1.00 1.00 	 Very limited Slope Seepage 	 1.00 1.00 	
Rodman	 Very limited Filtering capacity Seepage, bottom layer Slope	 1.00 1.00 1.00	 Very limited Slope Seepage 	 1.00 1.00 	
969F: Casco	 Very limited Filtering capacity Slope Seepage, bottom layer	 1.00 1.00 1.00	 Very limited Slope Seepage 	 1.00 1.00 	

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 			
	Rating class and limiting features	Value	Rating class and limiting features	Value		
0.607						
969F: Rodman	 Very limited		 Very limited	1		
no amari	Filtering	1.00	Slope	1.00		
	capacity		Seepage	1.00		
	Slope	1.00		j		
	Seepage, bottom layer	1.00				
1103A:	 					
Houghton	Very limited	İ	Very limited	İ		
	Ponding	1.00	Ponding	1.00		
	Depth to	1.00	Organic matter	1.00		
	saturated zone		content			
	Subsidence	1.00	Depth to	1.00		
	Seepage, bottom	1.00	saturated zone	1.00		
	layer 		Seepage 			
1480A:	İ	į		İ		
Moundprairie	Very limited		Very limited			
	Flooding	1.00	Ponding	1.00		
	Ponding Depth to	1.00 1.00	Flooding Depth to	1.00		
	saturated zone	1	saturated zone	1		
	Slow water	0.46	Seepage	0.53		
	movement	į		İ		
20023						
3073A: Ross	 Very limited		 Very limited			
KOSS	Flooding	1.00	Flooding	1.00		
	Seepage, bottom	1.00	Seepage	1.00		
	layer	i		İ		
	Slow water	0.46				
	movement					
	Depth to saturated zone	0.43]			
	sacuraced zone					
3076A:						
Otter	Very limited		Very limited			
	Flooding Ponding	1.00	Ponding Flooding	1.00		
	Depth to	1.00	Depth to	1.00		
	saturated zone		saturated zone			
	Slow water	0.46	Seepage	0.53		
	movement					
3082A:	 		 			
Millington	 Very limited		 Very limited			
-	Flooding	1.00	Flooding	1.00		
	Depth to	1.00	Depth to	1.00		
	saturated zone		saturated zone			
	Ponding	1.00	Ponding	1.00		
	Slow water movement	0.46	Seepage	0.53		

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	 Septic tank absorption fiel	ds	Sewage lagoons		
	Rating class and	Value	Rating class and	Value	
	limiting features		limiting features		
3107A: Sawmill	 Very limited		 Very limited		
SawiiiIII	Flooding	1.00	Flooding	1.00	
	Depth to	1.00	Depth to	1.00	
	saturated zone	İ	saturated zone	İ	
	Ponding	1.00	Ponding	1.00	
	Slow water	0.46	Seepage	0.53	
	movement		 		
3321A:	 		 	i	
	 Very limited	i	 Very limited	i	
	Flooding	1.00	Flooding	1.00	
	Slow water	0.46	Seepage	0.53	
	movement			-	
	Depth to saturated zone	0.40	 	-	
	Sacuraced Zone		 	i	
3451A:		i		i	
Lawson	Very limited	İ	Very limited	İ	
	Flooding	1.00	Flooding	1.00	
	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		
	Slow water movement	0.46	Seepage 	0.53	
		i		i	
3480A:	į	İ	İ	İ	
Moundprairie	: -		Very limited		
	Flooding	1.00	Flooding	1.00	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	
	Ponding	1.00	Ponding	1.00	
	Slow water	0.46	Seepage	0.53	
	movement	į		į	
3800A:					
Psamments	Very limited	1.00	Very limited		
	Flooding Filtering	1.00	Flooding Seepage	1.00	
	capacity		beepage		
	Seepage, bottom	1.00		i	
	layer	İ		İ	
	Depth to	0.40		!	
	saturated zone		 	-	
7073A:	 		 	1	
Ross	 Very limited		 Very limited	i	
	Seepage, bottom	1.00	Seepage	1.00	
	layer		Flooding	0.40	
	Slow water	0.46			
	movement				
	Depth to	0.40	 		
	saturated zone Flooding	0.40	 	1	
	F10001HG				

Table 18a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fiel	ds	Sewage lagoons 		
	Rating class and Value limiting features		Rating class and limiting features	Value	
8073A:					
Ross	Very limited		Very limited		
	Flooding	1.00	Flooding	1.00	
	Seepage, bottom layer	1.00 	Seepage 	1.00	
	Slow water movement	0.46	 		
	Depth to saturated zone	0.40			
8107A:	 		 		
Sawmill	-		Very limited		
	Flooding	1.00	Ponding	1.00	
	Ponding Depth to	1.00 1.00	Flooding Depth to	1.00	
	saturated zone	1	saturated zone	1	
	Slow water movement	0.46	Seepage	0.53	
8151A:	 		 		
Ridgeville	Very limited		Very limited		
	Flooding	1.00	Flooding	1.00	
	Depth to	1.00	Seepage	1.00	
	saturated zone Seepage, bottom layer	1.00	Depth to saturated zone 	 	
8404A:	 		 		
Titus	Very limited		Very limited		
	Flooding	1.00	Flooding	1.00	
	Slow water	1.00	Depth to	1.00	
	movement		saturated zone		
	Depth to saturated zone	1.00	Ponding	1.00	
	Ponding	1.00	 		
8451A:	 		 		
Lawson	Very limited Flooding	1.00	Very limited Flooding	1.00	
	Depth to	1.00	Depth to	1.00	
	saturated zone		saturated zone		
	Slow water movement	0.46	Seepage	0.53	
8516A:	 		 		
Faxon	Very limited		Very limited		
	Flooding	1.00	Depth to hard	1.00	
	Depth to	1.00	bedrock	1 00	
	saturated zone Depth to bedrock	1 00	Flooding Depth to	1.00	
	Ponding	1.00	saturated zone	1	
	Slow water	0.46	Ponding	1.00	
	movement		Seepage	0.53	
	į	i	 	İ	

Table 18b.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Trench sanitary		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	1	Rating class and limiting features	Value
23B: Blount	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
51A: Muscatune	Very limited Depth to saturated zone Too clayey	1.00	Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
60C2: La Rose	 Not limited 	 	 Not limited 	 	 Not limited 	
60D2: La Rose	 Somewhat limited Slope 	0.96	 Somewhat limited Slope	0.96	 Somewhat limited Slope	0.96
61A: Atterberry	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone		 Very limited Depth to saturated zone Too clayey	1.00
61B: Atterberry	 Very limited Depth to saturated zone Too clayey	1.00	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
67A: Harpster	Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone	 1.00 1.00 		 1.00 1.00 0.50
68A: Sable	 Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00 0.50
86B: Osco	Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone		 Somewhat limited Too clayey 	 0.50
86C2: Osco	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00	 Not limited 	

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87A: Dickinson	· -	:	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage	 1.00 1.00
87B: Dickinson	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage	 1.00 1.00
87C2: Dickinson	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage	 1.00 1.00
88B: Sparta	 Very limited Seepage, bottom layer Too sandy	 1.00 0.50	 Very limited Seepage	 1.00 	 Very limited Seepage Too sandy	 1.00 0.50
88D: Sparta	 Very limited Seepage, bottom layer Too sandy Slope	 1.00 1.00 0.04	 Very limited Seepage Slope 	 1.00 0.04 		 1.00 1.00 0.04
91A: Swygert	 Very limited Depth to saturated zone Too clayey	 1.00 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00
91B: Swygert	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00
91B2: Swygert	 Very limited Depth to saturated zone Too clayey	 1.00 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00
91C2: Swygert	 Very limited Depth to saturated zone Too clayey	 1.00 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	 Area sanitary landfill 		Daily cover for	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91C3: Swygert	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00
103A: Houghton	Very limited Depth to saturated zone Organic matter content Seepage, bottom layer Ponding	 1.00 1.00 1.00 1.00	 Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Organic matter content Ponding Seepage	 1.00 1.00 1.00 0.16
104A: Virgil	 Very limited Depth to saturated zone Seepage, bottom layer Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
105A: Batavia	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	0.50
105B: Batavia	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	 0.50
105C2: Batavia	 Very limited Seepage, bottom layer Too clayey Slope	 1.00 0.50 0.01	 Somewhat limited Slope 	 0.01 	 Somewhat limited Too clayey Slope 	 0.50 0.01
125A: Selma	 Very limited Depth to saturated zone Seepage, bottom layer Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding Seepage	 1.00 1.00 0.52
131B: Alvin	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Somewhat limited Seepage Too sandy 	 0.52 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary landfill		Daily cover for	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>
131C2: Alvin	 Very limited Seepage, bottom layer	 1.00	 Very limited Seepage	 1.00	 Somewhat limited Seepage	 0.52
132A:	 		 	 	 	l I
Starks	Very limited Depth to saturated zone Seepage, bottom layer Too clayey Too sandy	 1.00 1.00 0.50 0.50	Very limited Depth to saturated zone 	 1.00 	Very limited Depth to saturated zone Too clayey Too sandy Seepage	 1.00 0.50 0.50 0.22
134A:		İ				i
Camden	Very limited Seepage, bottom layer Too clayey	 1.00 0.50	Not limited	 	Somewhat limited Too clayey 	0.50
134B:					 	
Camden	 Very limited Seepage, bottom layer	 1.00 	 Not limited 	 	Somewhat limited Too clayey Seepage	0.50
134C2:						
Camden	Very limited Seepage, bottom layer Too sandy	 1.00 0.50	Not limited - -	 	Somewhat limited Too sandy Too clayey Seepage	 0.50 0.50 0.22
134D2:						
Camden	Very limited Seepage, bottom layer Slope	 1.00 0.96	Somewhat limited Slope -	 0.96 	Somewhat limited Slope Too clayey Seepage	 0.96 0.50 0.22
134D3:					 	
Camden	Very limited Seepage, bottom layer Slope Too clayey	 1.00 0.96 0.50	Very limited Seepage Slope 	 1.00 0.96 		0.96
134F:						
Camden	Very limited Slope Seepage, bottom layer Too clayey	 1.00 1.00 0.50	Very limited Slope Seepage 	 1.00 1.00 	Very limited Slope Too clayey 	 1.00 0.50
146A:						i
Elliott	Very limited Depth to saturated zone Too clayey	 1.00 0.50	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey	 1.00 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
146B: Elliott	Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
146B2: Elliott	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
147B2: Clarence	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 1.00
148A: Proctor	 Very limited Seepage, bottom layer	 1.00 	 Not limited 	 	 Somewhat limited Too clayey Seepage	 0.50 0.22
148B: Proctor	 Very limited Seepage, bottom layer	 1.00 	 Very limited Seepage 	 1.00 	 Somewhat limited Seepage 	 0.22
148C2: Proctor	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Very limited Seepage 	 1.00 	 Somewhat limited Too clayey	 0.50
149A: Brenton	 Very limited Depth to saturated zone Seepage, bottom layer Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
151A: Ridgeville	 Very limited Depth to saturated zone Seepage, bottom layer	 1.00 1.00	 Very limited Depth to saturated zone Seepage 	 1.00 1.00	 Very limited Depth to saturated zone Seepage	 1.00 0.22
151B: Ridgeville	 Very limited Depth to saturated zone Seepage, bottom layer	 1.00 1.00	 Very limited Depth to saturated zone Seepage 	 1.00 1.00	 Very limited Depth to saturated zone Seepage 	 1.00 0.22

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	 Trench sanitar landfill	У	Area sanitary		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152A: Drummer	 Very limited		 Very limited	 	 Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer Ponding Too clayey	1.00 1.00 0.50	Ponding 	1.00 	Ponding Too clayey 	1.00 0.50
154A:			 		 	
Flanagan	Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00
	Too clayey	0.50		 	Too clayey	0.50
171A:		į		į		į
Catlin	Very limited Depth to	1.00	Very limited Depth to	1.00	Somewhat limited Too clayey	0.50
	saturated zone	0.50	saturated zone		Depth to saturated zone	0.32
171B:						
Catlin	Very limited Depth to	1.00	Very limited Depth to	1.00	Somewhat limited Too clayey	0.50
	saturated zone Too clayey	0.50	saturated zone		Depth to saturated zone	0.32
171B2:			 		 	
Catlin	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone	 1.00 	Somewhat limited Too clayey Depth to	 0.50 0.32
	Too clayey	0.50	 	 	saturated zone	
171C2:						
Catlin	Very limited Depth to	1.00	Very limited Depth to	1.00	Somewhat limited Too clayey	0.50
	saturated zone	0.50	saturated zone	; 	Depth to saturated zone	0.32
171C3:						
Catlin	Very limited Depth to	1.00	Very limited Depth to	1.00	Somewhat limited Too clayey	0.50
	saturated zone Too clayey	0.50	saturated zone		Depth to saturated zone	0.32
193C2:					 	
Mayville	Somewhat limited Depth to saturated zone	 0.68 	Somewhat limited Depth to saturated zone	 0.04 	Somewhat limited Depth to saturated zone	 0.24
198A:	 		 		 	
Elburn	 Very limited		 Very limited		 Very limited	
	Depth to	1.00		1.00	: -	1.00
	saturated zone Seepage, bottom layer	 1.00 	saturated zone	 	saturated zone Too clayey 	 0.50
	Too clayey 	0.50	 		 	

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	
199A: Plano	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	 0.50
1000						
199B: Plano	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	0.50
199C2:	 	 	 	 	 	
Plano	Very limited Seepage, bottom layer Too clayey	 1.00 0.50	Not limited 	 	Somewhat limited Too clayey 	0.50
206A:	 		 	l I	 	
Thorp	Very limited Depth to saturated zone Ponding Seepage, bottom layer Too clayey	 1.00 1.00 1.00 0.50	 Very limited Ponding Depth to saturated zone 	 1.00 1.00 	 Very limited Ponding Depth to saturated zone Too clayey	 1.00 1.00 0.50
210A:	j	İ	İ	İ	İ	İ
Lena	Very limited Depth to saturated zone Seepage, bottom layer Organic matter content Ponding	 1.00 1.00 1.00 	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Organic matter content Ponding Seepage	 1.00 1.00 1.00 0.52
219A:			 		 	
Millbrook	Very limited Depth to saturated zone Seepage, bottom layer Too clayey	 1.00 1.00 0.50	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey	 1.00 0.50
223B:			 		 	
Varna	Very limited Too clayey Depth to saturated zone	 1.00 0.68 	Somewhat limited Depth to saturated zone 	 0.04 	Very limited Too clayey Depth to saturated zone	 1.00 0.24
223B2:	į	į		į		į
Varna	Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	Somewhat limited Depth to saturated zone 	 0.04 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223C2: Varna	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
223C3: Varna	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
223D2: Varna	Somewhat limited Depth to saturated zone Too clayey Slope	 0.68 0.50 0.04	Somewhat limited Slope Depth to saturated zone	 0.04 0.04 	Somewhat limited Too clayey Depth to saturated zone Slope	 0.50 0.24 0.04
223D3: Varna	 Somewhat limited Depth to saturated zone Too clayey Slope	 0.68 0.50 0.04	 Somewhat limited Slope Depth to saturated zone	 0.04 0.04 	 Somewhat limited Too clayey Depth to saturated zone Slope	 0.50 0.24 0.04
228B: Nappanee	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
228C2: Nappanee	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
228C3: Nappanee	 Very limited Depth to saturated zone Too clayey	 1.00 1.00 	 Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey Hard to compact	 1.00 1.00 1.00
232A: Ashkum	Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone Ponding	 1.00 1.00 	 Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50
233A: Birkbeck	 Somewhat limited Depth to saturated zone Too clayey	 0.86 0.50	 Somewhat limited Depth to saturated zone	 0.19 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.47

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	 Trench sanitar landfill 	У	Area sanitary landfill		Daily cover for	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233B: Birkbeck	 Somewhat limited Depth to saturated zone Too clayey	 0.86 0.50	 Somewhat limited Depth to saturated zone 	 0.19 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.47
233C2: Birkbeck	Somewhat limited Depth to saturated zone Too clayey	 0.86 0.50	Somewhat limited Depth to saturated zone	 0.19 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.47
234A: Sunbury	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
235A: Bryce	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00 	saturated zone Too clayey	 1.00 1.00 1.00
236A: Sabina	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Hard to compact Too clayey	 1.00 1.00 0.50
238A: Rantoul	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding 	 1.00 1.00 	saturated zone Too clayey	 1.00 1.00 1.00 1.00
241C3: Chatsworth	 Very limited Too clayey Depth to saturated zone	 1.00 0.98 	 Somewhat limited Depth to saturated zone 	0.56	 Very limited Too clayey Hard to compact Depth to saturated zone	 1.00 1.00 0.76
241D3: Chatsworth	 Very limited Too clayey Depth to saturated zone Slope	 1.00 0.98 0.04	 Somewhat limited Depth to saturated zone Slope 	 0.56 0.04 	 Very limited Too clayey Hard to compact Depth to saturated zone Slope	 1.00 1.00 0.76 0.04

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary landfill		Daily cover for landfill	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241E3: Chatsworth		 1.00 1.00 0.98	 Very limited Slope	 1.00 0.56	 Very limited Too clayey	 1.00 1.00 1.00 0.76
241F: Chatsworth	 Very limited Slope Too clayey Depth to saturated zone	 1.00 1.00 0.98	 Very limited Slope Depth to saturated zone	 1.00 0.56 	:	 1.00 1.00 1.00 0.76
241G: Chatsworth	 Very limited Slope Too clayey Depth to saturated zone	 1.00 1.00 0.98 	 Very limited Slope Depth to saturated zone	 1.00 0.56 		 1.00 1.00 1.00 0.76
242A: Kendall	Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
243A: St. Charles	 Somewhat limited Too clayey	0.50	 Not limited 		 Somewhat limited Too clayey	0.50
243B: St. Charles	 Somewhat limited Too clayey 	 0.50	 Not limited 	 	 Somewhat limited Too clayey 	 0.50
243C2: St. Charles	 Somewhat limited Too clayey	0.50	 Not limited 	 	 Somewhat limited Too clayey	0.50
244A: Hartsburg	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
278A: Stronghurst	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
278B: Stronghurst	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey	 1.00 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	<u> </u>	limiting features	
279B: Rozetta	Very limited Depth to saturated zone Too clayey	 1.00 0.50	Very limited Depth to saturated zone	 1.00 	 Somewhat limited Too clayey 	 0.50
280C2:	 		 	 	 	
Fayette	Somewhat limited Too clayey	0.50	 Not limited 	 	Somewhat limited Too clayey	0.50
290A:	 	i	 	l I	 	i
Warsaw	Very limited Seepage, bottom layer Too sandy	 1.00 0.50	 Very limited Seepage 	 1.00 	Very limited Seepage Too sandy Gravel content	 1.00 0.50 0.21
290B:		i		İ		i
Warsaw	Very limited Seepage, bottom layer Too sandy	 1.00 0.50	 Very limited Seepage 	 1.00 	Very limited Seepage Too sandy Gravel content	 1.00 0.50 0.09
00000						
290C2: Warsaw	 Very limited Seepage, bottom layer Too sandy	 - 1.00 0.50	 Very limited Seepage 	 	 Very limited Seepage Too sandy Gravel content	 1.00 0.50 0.39
293A:	 		 	l I	 	
Andres	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
293B:	 		 		 	
Andres	Very limited Depth to saturated zone Too clayey	 1.00 0.50	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey	 1.00 0.50
294B:	 	i	 			i
Symerton	Somewhat limited Depth to saturated zone	 0.53 	Somewhat limited Depth to saturated zone	 0.01 	Somewhat limited Depth to saturated zone	0.14
294C2:		i		İ		i
Symerton	Somewhat limited Depth to saturated zone Too clayey	 0.80 0.50	Somewhat limited Depth to saturated zone 	 0.12 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.38
295A: Mokena	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
295B: Mokena	Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone	1.00
298B: Beecher	Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone Too clayey	 1.00 0.50
311B: Ritchey	 Very limited Depth to bedrock Too clayey	:	 Very limited Depth to bedrock	:	 Very limited Depth to bedrock Too clayey	 1.00 0.50
314A: Joliet	 Very limited Depth to saturated zone Depth to bedrock Ponding	1.00	saturated zone	1.00	 Very limited Depth to bedrock Depth to saturated zone Ponding	 1.00 1.00 1.00
315B: Channahon	 Very limited Depth to bedrock Too clayey	:	 Very limited Depth to bedrock	:	 Very limited Depth to bedrock Too clayey	 1.00 0.50
317A: Millsdale	 Very limited Depth to saturated zone Depth to bedrock Ponding Too clayey	1.00	saturated zone	1.00	saturated zone	 1.00 1.00 1.00 0.50
318B: Lorenzo	 Very limited Seepage, bottom layer Too sandy	 1.00 0.50	 Very limited Seepage 	 1.00 	 Very limited Seepage Gravel content Too sandy	 1.00 0.64 0.50
318C2: Lorenzo	 Very limited Seepage, bottom layer Too sandy	 1.00 0.50	 Very limited Seepage 	 1.00 	 Very limited Seepage Gravel content Too sandy	 1.00 0.73 0.50
320B: Frankfort	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
320C2: Frankfort	 Very limited Depth to saturated zone Too clayey	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 1.00

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
325B: Dresden	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage Gravel content	 1.00 1.00 0.01
325C2: Dresden	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage	 1.00 1.00
327B: Fox	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage Gravel content	 1.00 1.00 0.03
327C2: Fox	 Very limited Seepage, bottom layer Too sandy	 1.00 1.00	 Very limited Seepage 	 1.00 	 Very limited Too sandy Seepage Gravel content	 1.00 1.00 0.11
327D2: Fox	 Very limited Seepage, bottom layer Too sandy Slope	 1.00 1.00 0.04	 Very limited Seepage Slope 	 1.00 0.04	•	 1.00 1.00 0.04 0.04
330A: Peotone	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00 	saturated zone	 1.00 1.00 1.00
344A: Harvard		 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	 0.50
344B: Harvard	 Very limited Seepage, bottom layer Too clayey		 Not limited 		 Somewhat limited Too clayey 	0.50
344C2: Harvard	-	 1.00 0.50	 Not limited - 	 	 Somewhat limited Too clayey 	 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary		Area sanitary		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
356A:	 					İ
Elpaso	 Very limited	i	 Very limited	i	 Very limited	i
_	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone	İ	saturated zone	İ	saturated zone	ĺ
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too clayey	0.50	 		Too clayey	0.50
375A:						
Rutland	:		Very limited		Very limited	!
	Depth to	1.00	Depth to	1.00		1.00
	saturated zone		saturated zone		Depth to	1.00
	Too clayey	1.00			saturated zone	
375B:	 	į	177	į		į
Rutland			Very limited		Very limited	
	Depth to	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	saturated zone Too clayey	1.00	saturated zone		Depth to saturated zone	1.00
375B2:			l			
Rutland	 Verv limited		 Very limited	 	 Very limited	1
	Depth to	1.00	Depth to	1.00	<u>-</u>	1.00
	saturated zone		saturated zone		saturated zone	
	Too clayey	0.50			Too clayey	0.50
388B:	 					
Wenona	Somewhat limited	į	Somewhat limited	į	Somewhat limited	i
	Depth to	0.68	Depth to	0.04	Too clayey	0.50
	saturated zone		saturated zone		Depth to	0.24
	Too clayey	0.50			saturated zone	
388B2:						
Wenona	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to	0.68	Depth to	0.04	Too clayey	0.50
	saturated zone		saturated zone		Depth to	0.24
	Too clayey	0.50			saturated zone	
388C2:		į				į
Wenona	Somewhat limited		Somewhat limited	!	Somewhat limited	
	Depth to	0.68	Depth to saturated zone	0.04		0.50
	saturated zone Too clayey	0.50	saturated zone		Depth to saturated zone	0.24
397F:	 		 		 -	
Boone	 Verv limited		 Very limited		 Very limited	i
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1	Seepage	1.00	Too sandy	1.00
	Seepage, bottom	1.00	Depth to bedrock	:	<u>-</u>	1.00
	layer	į	- 	İ	Depth to bedrock	1.00
	Too sandy	1.00	 		 	
413B:	 					
Gale		1 00	Very limited	1 00	Very limited	1 00
	Depth to bedrock	:	Seepage	1.00	Depth to bedrock	11.00
	Seepage, bottom	1.00	Depth to bedrock	11.00	 	

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
413C2: Gale	Depth to bedrock	1		1.00	 Very limited Depth to bedrock 	 1.00
435A: Streator	 Very limited Depth to saturated zone Too clayey Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	saturated zone	 1.00 1.00 1.00
448B: Mona	Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
448C2: Mona	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
512B: Danabrook	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
512C2: Danabrook	 Somewhat limited Depth to saturated zone	:	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Depth to saturated zone	 0.24
516A: Faxon	 Very limited Depth to saturated zone Depth to bedrock Ponding	1.00	saturated zone	1.00	saturated zone Depth to bedrock	 1.00 1.00 1.00
527C2: Kidami	 Somewhat limited Depth to saturated zone Too clayey		 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
527D2: Kidami	 Somewhat limited Depth to saturated zone Slope	 0.68 0.04	Depth to	 0.04 0.04 	: -	 0.24 0.04
530B: Ozaukee	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover fo	or
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
530C2: Ozaukee	 Somewhat limited Depth to saturated zone Too clayey	 0.98 0.50	 Somewhat limited Depth to saturated zone	 0.56 	 Somewhat limited Depth to saturated zone Too clayey	 0.76 0.50
530C3:				 		
Ozaukee	Somewhat limited Depth to saturated zone Too clayey	 0.76 0.50	Somewhat limited Depth to saturated zone 	 0.08 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.32
530D2: Ozaukee	Somewhat limited Depth to saturated zone Too clayey Slope	 0.98 0.50 0.04	Somewhat limited Depth to saturated zone Slope	 0.56 0.04	Somewhat limited Depth to saturated zone Too clayey	 0.76 0.50 0.04
530D3:	Slope 		 	 	Slope 	
	Very limited Depth to saturated zone Too clayey Slope	 1.00 0.50 0.04	Somewhat limited Depth to saturated zone Slope	 0.75 0.04	Somewhat limited Depth to saturated zone Too clayey Slope	 0.86 0.50 0.04
530E2:	Slope		 	 	Slope 	
	 Slope Depth to saturated zone Too clayey	 1.00 0.98 0.50	 Very limited Slope Depth to saturated zone	 1.00 0.56 	 Very limited Slope Depth to saturated zone Too clayey	 1.00 0.76 0.50
530F: Ozaukee	 Very limited Slope Depth to saturated zone Too clayey	 1.00 0.68 0.50	 Very limited Slope Depth to saturated zone	 1.00 0.04 	 Very limited Slope Too clayey Depth to saturated zone	 1.00 0.50 0.24
541B: Graymont	 Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	 Somewhat limited Depth to saturated zone	 0.04 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
541B2:				 		
Graymont	Somewhat limited Depth to saturated zone Too clayey	 0.68 0.50	Somewhat limited Depth to saturated zone 	 0.04 	Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
541C2: Graymont	 Somewhat limited Depth to saturated zone Too clayey	 0.86 0.50	 Somewhat limited Depth to saturated zone	 0.19 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.47

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary landfill		Daily cover fo	r
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542A: Rooks	Very limited Depth to saturated zone Too clayey	 1.00 0.50	Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
542B: Rooks	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	 1.00 0.50
549B: Marseilles	 Very limited Depth to saturated zone Depth to bedrock Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone Depth to bedrock	1.00	 Somewhat limited Depth to bedrock Too clayey	 1.00 0.50
549C2: Marseilles	 Very limited Depth to bedrock Too clayey 	 1.00 0.50 	 Very limited Depth to bedrock 	:	 Very limited Hard to compact Depth to bedrock Too clayey	 1.00 1.00 0.50
549D2: Marseilles	 Very limited Depth to bedrock Slope Too clayey	1	 Very limited Depth to bedrock Slope 	:	·	 1.00 1.00 0.96 0.50
549F: Marseilles	 Very limited Slope Depth to bedrock Too clayey	1.00	 Very limited Slope Depth to bedrock	1.00	· -	 1.00 1.00 1.00 0.50
549G: Marseilles	 Very limited Slope Depth to bedrock Too clayey	 1.00 1.00 0.50	 Very limited Slope Depth to bedrock 	1.00	 Very limited Slope Hard to compact Depth to bedrock Too clayey	 1.00 1.00 1.00 0.50
554B: Kernan	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
560D2: St. Clair	 Very limited Too clayey Depth to saturated zone Slope	 1.00 0.68 0.04	 Somewhat limited Slope Depth to saturated zone	 0.04 0.04 		 1.00 0.24 0.04

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover for landfill	or
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						1
560E:						
St. Clair	Very limited Too clayey	1.00	Very limited Slope	1.00	Very limited Too clayey	1.00
	Slope	1.00	Depth to	0.56		1.00
	Depth to	0.98	saturated zone		Depth to	0.76
	saturated zone	İ		į	saturated zone	į
567B:	 		 			
Elkhart	 Very limited	İ	 Very limited	İ	 Somewhat limited	i
	Depth to	1.00	Depth to	1.00	Too clayey	0.50
	saturated zone		saturated zone			!
	Too clayey	0.50	 		 	
572A:						İ
Loran		:	Very limited	1	Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to bedrock	1.00	Depth to bedrock	0.18		0.50
	Too clayey	0.50			Depth to bedrock	
572B: Loran	 Very limited	1	 Very limited	1	 Very limited	
noran	Depth to	1.00	! -	1.00	_	1.00
	saturated zone	İ	saturated zone	i	saturated zone	i
	Depth to bedrock	1.00	Depth to bedrock	0.32	Too clayey	0.50
	Too clayey	0.50	 		Depth to bedrock	0.32
572C2:	 		 		 	
Loran	Very limited	ĺ	Very limited	Ì	Very limited	ĺ
	Depth to	1.00	· -	1.00	-	1.00
	saturated zone		saturated zone		saturated zone	
	Depth to bedrock Too clayey	0.50	 	1	Too clayey 	0.50
				İ		İ
614A:	 		 		 	
Chenoa	Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too clayey	0.50		į	Too clayey	0.50
614B:	 		 		 	
Chenoa	 Very limited		 Very limited		 Very limited	i
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	1
	Too clayey	0.50	 	 	Too clayey	0.50
662B:						
Barony	Very limited	ĺ	Very limited	Ì	Somewhat limited	ĺ
	Depth to	1.00	: -	1.00		0.50
	saturated zone Seepage, bottom	11 00	saturated zone		Depth to saturated zone	0.24
	seepage, bottom layer	1.00	 	 	Seepage	0.22
	Too clayey	0.50				
663B:	 		 		 	
Clare	 Very limited		 Very limited		 Somewhat limited	
	Depth to	1.00		1.00		0.50
	saturated zone Too clayey	0.50	saturated zone		Depth to saturated zone	0.24

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary	•	Daily cover fo	r
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
667B: Kaneville	Very limited Depth to saturated zone Seepage, bottom layer Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
668B: Somonauk	 Very limited Depth to saturated zone Seepage, bottom layer	 1.00 1.00	 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Depth to saturated zone	 0.24
675B: Greenbush	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	1.00	 Somewhat limited Too clayey	0.50
675C2: Greenbush	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	1.00	 Somewhat limited Too clayey 	
679B: Blackberry	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	1.00	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
680B: Campton	 Very limited Depth to saturated zone Seepage, bottom layer Too clayey	 1.00 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
712A: Spaulding	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50
715A: Arrowsmith	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00
732A: Appleriver	 Very limited Depth to saturated zone Depth to bedrock Too clayey	1.00	Very limited Depth to saturated zone Depth to bedrock	1.00	 Very limited Depth to saturated zone Depth to bedrock Too clayey	 1.00 0.84 0.50

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover fo	r
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
732B: Appleriver	 Very limited Depth to saturated zone Depth to bedrock Too clayey	1.00	 Very limited Depth to saturated zone Depth to bedrock	1.00	Depth to	 1.00 1.00 0.01
791A: Rush	: -	 - 1.00 - 0.50	 Not limited 	 	 Somewhat limited Too clayey 	0.50
791B: Rush	 Very limited Seepage, bottom layer Too clayey	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	0.50
792A: Bowes	: -	 1.00 0.50	 Not limited 	 	 Somewhat limited Too clayey 	0.50
792B: Bowes	 Very limited Seepage, bottom layer Too clayey	 - 1.00 - 0.50	 Very limited Seepage	 1.00 	 Somewhat limited Too clayey 	0.50
794G: Marseilles	 Very limited Slope Depth to bedrock Too clayey	1.00	 Very limited Slope Depth to bedrock	1.00	 Very limited Slope Hard to compact Depth to bedrock Too clayey	 1.00 1.00 1.00 0.50
Northfield	 Very limited Slope Depth to bedrock	 1.00 1.00	 Very limited Slope Depth to bedrock	1.00	 Very limited Depth to bedrock Slope	 1.00 1.00
Ritchey	 Very limited Slope Depth to bedrock Too clayey	 1.00 1.00 0.50	 Very limited Slope Depth to bedrock	 1.00 1.00	 Very limited Depth to bedrock Slope Too clayey	 1.00 1.00 0.50
802B: Orthents, loamy	 Not limited 	 	 Not limited 	 	 Not limited 	
802D: Orthents, loamy	 Somewhat limited Slope 	 0.04	 Somewhat limited Slope	 0.04	 Somewhat limited Slope 	0.04
804D: Orthents, acid	 Very limited Too clayey Slope	 1.00 0.01	 Somewhat limited Slope 	 0.01 	 Very limited Too clayey Slope 	 1.00 0.01

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	 Trench sanitar landfill 	У	 Area sanitary landfill 		 Daily cover fo landfill	r
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	
804G: Orthents, acid	 Very limited Slope Too clayey	 1.00 1.00	 Very limited Slope	 1.00	 Very limited Slope Too clayey	 1.00 1.00
805B: Orthents, clayey	 Very limited Too clayey Depth to saturated zone	 1.00 0.68 	-	 0.04 	 Very limited Too clayey Depth to saturated zone	 1.00 0.24
814A: Muscatune	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	1	 Very limited Depth to saturated zone Too clayey	1.00
Buckhart	 Very limited Depth to saturated zone Too clayey	 - 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Too clayey Depth to saturated zone	 0.50 0.24
817A: Channahon	 Very limited Depth to bedrock Seepage, bottom layer	!	 Very limited Depth to bedrock 	1	 Very limited Depth to bedrock Seepage	1.00
Hesch	 Very limited Depth to bedrock Seepage, bottom layer	1.00		1.00	: -	 1.00 0.22
817B: Channahon	Depth to bedrock		 Very limited Depth to bedrock 	1	 Very limited Depth to bedrock Seepage	 1.00 0.22
Hesch	 Very limited Depth to bedrock Seepage, bottom layer		 Very limited Depth to bedrock Seepage		 Very limited Depth to bedrock Seepage	 1.00 0.22
818A: Flanagan	 Very limited Depth to saturated zone Too clayey	 1.00 0.50	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Too clayey	1.00
Catlin	 Very limited Depth to saturated zone Too clayey	 - 1.00 0.50	 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Too clayey Depth to saturated zone	0.50
820E: Hennepin	 Very limited Slope	 1.00 	 Very limited Slope	 1.00	 Very limited Slope	1.00

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	 Trench sanitar landfill 	У	 Area sanitary landfill 		Daily cover fo	r
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
820E: Casco	-	 1.00 1.00 1.00	 Very limited Seepage Slope 	 1.00 1.00	:	 1.00 1.00 1.00
820G: Hennepin	 Very limited Slope	1.00	 Very limited Slope	1.00	 Very limited Slope	1.00
Casco	 Very limited Slope Seepage, bottom layer Too sandy	 1.00 1.00 1.00	<u>-</u>	 1.00 1.00 	: -	 1.00 1.00 1.00 0.03
830: Landfills	 Not rated 	 	 Not rated 	 	 Not rated 	
864: Pits, quarry	 Not rated 	 	 Not rated 	 	 Not rated 	
865: Pits, gravel	 Not rated 	 	 Not rated 	 	 Not rated 	
969E2: Casco	 Very limited Seepage, bottom layer Too sandy Slope	 1.00 1.00 1.00	 Very limited Seepage Slope 	 1.00 1.00 	:	 1.00 1.00 1.00 0.20
Rodman	 Very limited Slope Seepage, bottom layer Too sandy	 1.00 1.00 0.50	<u>-</u>	 1.00 1.00 	: -	 1.00 1.00 1.00 0.50
969F:						
Casco	Very limited Slope Seepage, bottom layer Too sandy	 1.00 1.00 1.00	Very limited Slope Seepage 	 1.00 1.00 	Very limited Slope Too sandy Seepage Gravel content	 1.00 1.00 1.00 0.34
Rodman	 Very limited Slope Seepage, bottom layer Too sandy	 1.00 1.00 0.50	 Very limited Slope Seepage 	 1.00 1.00 	 Very limited Slope Seepage Gravel content Too sandy	 1.00 1.00 1.00 0.50
1103A: Houghton	Very limited Depth to saturated zone Ponding Organic matter content Seepage, bottom layer	 1.00 1.00 1.00 1.00	 Very limited Ponding Depth to saturated zone Seepage	 1.00 1.00 1.00		 1.00 1.00 1.00 0.16

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	 Trench sanitar landfill 	У	 Area sanitary landfill 		 Daily cover fo landfill 	or
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1480A: Moundprairie	 Worn limited		Very limited	 	 Very limited	İ
Mountapratite	Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	Depth to saturated zone Ponding Too clayey	1.00 1.00 0.50
3073A:	 	i	 			i
Ross	Very limited Flooding Depth to saturated zone Seepage, bottom layer	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Not limited	
3076A:	İ	İ	İ	į	j	İ
Otter	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
3082A:	 		 	 	 	l I
Millington	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
3107A:	 		 	 	 	l I
Sawmill	 Very limited Flooding Depth to saturated zone Ponding Too clayey	 1.00 1.00 1.00 0.50	 Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00	 Very limited Depth to saturated zone Ponding Too clayey	 1.00 1.00 0.50
3321A:	 		 			1
Du Page	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Not limited - - -	
3451A:		İ		İ		i
Lawson	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Depth to saturated zone 	 1.00
3480A: Moundprairie			 Very limited	 	 Very limited	
	Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Depth to saturated zone Ponding	1.00 1.00

Table 18b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitar	У	Area sanitary		Daily cover fo	or
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
	!	İ				İ
3800A: Psamments			 Very limited		 Very limited	1
rsammencs	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Depth to	1.00		1.00	:	1.00
	saturated zone		saturated zone			1
	Seepage, bottom	1.00	Seepage	1.00		i
	layer	į		İ	İ	į
	Too sandy	1.00		į	ĺ	į
7073A:	İ		 		l I	
Ross	 Very limited		 Very limited		 Somewhat limited	
	Depth to	1.00	Depth to	1.00	Seepage	0.22
	saturated zone		saturated zone			
	Seepage, bottom	1.00		1.00		
	layer		Flooding	0.40		
	Flooding	0.40	l		l I	
8073A:						
Ross	Very limited		Very limited		Not limited	
	Flooding	1.00		1.00		
	Depth to	1.00	Depth to	1.00		!
	saturated zone		saturated zone			!
	Seepage, bottom layer	1.00	 	 	 	
8107A:			 		 	
Sawmill	 Verv limited		 Very limited	 	 Very limited	i
	Flooding	1.00	! -	1.00	: -	1.00
	Depth to	1.00	Ponding	1.00	Depth to	1.00
	saturated zone		Depth to	1.00	saturated zone	
	Ponding	1.00	1		Too clayey	0.50
	Too clayey	0.50	l		 	
8151A:			 		 	
Ridgeville	Very limited		Very limited		Very limited	
	Flooding	1.00	!	1.00	Depth to	1.00
	Depth to	1.00		1.00	saturated zone	
	saturated zone	1.00	saturated zone	1.00	Seepage	0.22
	Seepage, bottom layer		Seepage 		 	
8404A:	 Very limited		 Very limited		 Very limited	
Titus	Flooding	1.00		1.00		1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Hard to compact	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too clayey	0.50			Too clayey	0.50
8451A:	 		 		 	
Lawson	Very limited	i	 Very limited	İ	 Very limited	i
		1 00		1.00		1.00
	Flooding	1.00	Flooding	1.00	Depth to	11.00
	Depth to	1.00	Depth to	1.00	saturated zone	

Table 18b.--Sanitary Facilities--Continued

Map symbol	Trench sanitary		Area sanitary	•	Daily cover fo	or
and soil name	landfill		landfill		landfill	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	1	limiting features	
3516A:			 		 	
Faxon	- Very limited	1	 Very limited		 Very limited	ì
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		ĺ
		1		1	1	1

Table 19a. -- Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as so of gravel	ource	Potential as source of sand		
	Rating class	Value	Rating class	Value	
23B: Blount	 Poor Bottom layer Thickest layer	 0.00 0.00		 0.00 0.00	
51A: Muscatune	 Poor Bottom layer Thickest layer		 Poor Bottom layer Thickest layer	0.00	
60C2, 60D2:	 	l I	 		
La Rose	Poor Bottom layer Thickest layer		Poor Bottom layer Thickest layer	0.00	
61A, 61B: Atterberry	 Poor Bottom layer Thickest layer	1	 Poor Bottom layer Thickest layer	0.00	
67A: Harpster	 Poor Bottom layer Thickest layer		 Poor Bottom layer Thickest layer	0.00	
68A: Sable	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
86B, 86C2: Osco	 Poor Bottom layer Thickest layer		 Poor Bottom layer Thickest layer	0.00	
87A, 87B: Dickinson	 Poor Bottom layer Thickest layer	0.00		0.00	
87C2: Dickinson	 Poor Bottom layer Thickest layer		 Fair Thickest layer Bottom layer	 0.04 0.67	
88B: Sparta	 Poor Bottom layer Thickest layer	0.00		 0.07 0.10	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	Potential as sou of gravel	rce	Potential as so of sand	urce
	Rating class	Value	Rating class	Value
88D: Sparta	 Poor Bottom layer Thickest layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.10 0.31
91A, 91B, 91B2, 91C2, 91C3: Swygert	İ	 0.00 0.00	:	 0.00 0.00
103A: Houghton	 Poor Bottom layer Thickest layer	 0.00 0.00	:	 0.00 0.00
104A: Virgil	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00
105A, 105B, 105C2: Batavia	 Poor Bottom layer Thickest layer	0.00		0.00
125A: Selma	 Poor Bottom layer Thickest layer	0.00	:	0.00
131B: Alvin	 Poor Bottom layer Thickest layer	 0.00 0.00	:	0.00
131C2: Alvin	 Poor Bottom layer Thickest layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.03 0.11
132A: Starks	!	 0.00 0.00		0.00
134A: Camden	Bottom layer	 0.00 0.00	:	 0.00 0.06
134B: Camden	 Poor Bottom layer Thickest layer	 0.00 0.00	:	0.00
134C2, 134D2: Camden	 Poor Bottom layer Thickest layer	 0.00 0.00	:	 0.00 0.08

Table 19a.--Construction Materials--Continued

Map symbol and soil name	 Potential as sou of gravel	rce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
134D3, 134F: Camden	 Poor Bottom layer Thickest layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.00 0.09	
146A, 146B, 146B2: Elliott	 Poor Bottom layer Thickest layer	0.00	•	0.00	
147B2: Clarence	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
148A, 148B: Proctor	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
148C2: Proctor	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
149A: Brenton	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
151A: Ridgeville	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	0.00	
151B: Ridgeville	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	0.00	
152A: Drummer	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
154A: Flanagan	 Poor Bottom layer Thickest layer	0.00	· -	0.00	
171A, 171B, 171B2, 171C2, 171C3: Catlin	 - Poor Bottom layer Thickest layer	 0.00 0.00	 - Poor Bottom layer Thickest layer	 0.00 0.00	
193C2: Mayville	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	Potential as sou of gravel	rce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
198A: Elburn		 0.00 0.00	·	 0.00 0.05	
199A, 199B, 199C2: Plano	!	 0.00 0.00	·	0.00	
206A: Thorp	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	0.00	
210A: Lena	Bottom layer	 0.00 0.00	· -	0.00	
219A: Millbrook	!	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
223B, 223B2, 223C2, 223C3, 223D2, 223D3: Varna	!	 0.00 0.00	· -	0.00	
228B, 228C2, 228C3: Nappanee	Bottom layer	 0.00 0.00		 0.00 0.00	
232A: Ashkum	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
233A, 233B, 233C2: Birkbeck		 0.00 0.00		0.00	
234A: Sunbury	Bottom layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
235A: Bryce	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
236A: Sabina	 Poor Bottom layer Thickest layer	 0.00 0.00	:	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	 Potential as sou of gravel 	rce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
238A: Rantoul	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
241C3, 241D3, 241E3, 241F, 241G: Chatsworth	 - Poor Bottom layer Thickest layer	 0.00 0.00	 - Poor Bottom layer Thickest layer	0.00	
242A: Kendall	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
243A, 243B, 243C2:	İ	İ	İ	į	
St. Charles	Poor Bottom layer Thickest layer 	 0.00 0.00	Poor Bottom layer Thickest layer 	 0.00 0.00	
244A:	İ	İ	İ	į	
Hartsburg	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	
278A, 278B:		İ		İ	
Stronghurst	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	
279B: Rozetta	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
280C2:	 		 		
Fayette	 Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	
290A: Warsaw	 Poor Thickest layer Bottom layer	 0.00 0.00		0.00	
290B: Warsaw	 Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer	0.00	
290C2: Warsaw	 Poor Thickest layer Bottom layer	 0.00 0.00	 Fair Thickest layer Bottom layer	0.00	
293A, 293B:	[[
Andres	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	 Potential as sow of gravel 	ırce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
294B, 294C2: Symerton	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
295A, 295B: Mokena	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
298B: Beecher	 Poor Bottom layer Thickest layer	 0.00 0.00	· -	 0.00 0.00	
311B: Ritchey	 Poor Bottom layer Thickest layer	0.00	-	0.00	
314A: Joliet	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
315B: Channahon	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
317A: Millsdale	 Poor Bottom layer Thickest layer	0.00	-	0.00	
318B, 318C2: Lorenzo	 Poor Thickest layer Bottom layer	0.00	-	 0.00 0.31	
320B, 320C2: Frankfort	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
325B, 325C2: Dresden	 Poor Thickest layer Bottom layer	0.00	-	0.00	
327B, 327C2, 327D2: Fox	 Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.31	
330A: Peotone	 Poor Bottom layer Thickest layer 	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	Potential as so of gravel	urce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
344A, 344B, 344C2:					
Harvard	Poor	İ	Poor	ĺ	
	Bottom layer Thickest layer	0.00	Bottom layer Thickest layer	0.00	
356A:	 		 		
Elpaso	!		Poor		
	Bottom layer Thickest layer	0.00	Bottom layer Thickest layer	0.00	
375A, 375B, 375B2:			 		
Rutland	!		Poor		
	Bottom layer Thickest layer	0.00	<u>-</u>	0.00	
388B, 388B2, 388C2:			 		
Wenona			Poor		
	Bottom layer Thickest layer	0.00	Bottom layer Thickest layer	0.00	
397F:	 Page		l mada		
Boone	Bottom layer	0.00	Fair Thickest layer	0.00	
	Thickest layer	0.00	-	0.99	
413B, 413C2:			 		
Gale			Fair		
	Bottom layer Thickest layer	0.00	Thickest layer Bottom layer	0.00	
435A:		l]		
Streator	Poor	i	Poor	i	
	Bottom layer	0.00	· -	0.00	
	Thickest layer	0.00	Thickest layer	0.00	
448B, 448C2:		į			
Mona	Poor	0.00	Poor Bottom layer	0.00	
	Bottom layer Thickest layer	0.00		0.00	
512B, 512C2:			 		
Danabrook	1		Poor		
	Bottom layer Thickest layer	0.00	Bottom layer Thickest layer	0.00	
	į -	į	-	į	
516A: Faxon	Poor	l I	 Poor		
1 anon	Bottom layer	0.00	Bottom layer	0.00	
	Thickest layer	0.00	Thickest layer	0.00	
527C2, 527D2:		İ		i	
Kidami	!		Poor		
	Bottom layer Thickest layer	0.00	Bottom layer Thickest layer	0.00	
530B, 530C2, 530C3,			 		
530D2, 530D3, 530E2, 530F:	 		 		
Ozaukee	Poor	į	Poor	i	
	Bottom layer	0.00	Bottom layer	0.00	
	Thickest layer	0.00	Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	Potential as so of gravel	ource	Potential as source		
	Rating class	Value	Rating class	Value	
541B, 541B2, 541C2: Graymont	 Poor Bottom layer Thickest layer	 0.00	· -	 0.00 0.00	
542A, 542B: Rooks	 Poor Bottom layer Thickest layer	 0.00 0.00	· -	 0.00 0.00	
549B, 549C2, 549D2, 549F, 549G: Marseilles	 Poor Bottom layer Thickest layer	0.00	 - Poor Bottom layer Thickest layer	0.00	
554B: Kernan	 Poor Bottom layer Thickest layer		 Poor Bottom layer Thickest layer	0.00	
560D2, 560E: St. Clair	 Poor Bottom layer Thickest layer	0.00	· -	0.00	
567B: Elkhart	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
572A, 572B, 572C2: Loran	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
614A, 614B: Chenoa	 Poor Bottom layer Thickest layer	0.00	· -	0.00	
662B: Barony	 Poor Bottom layer Thickest layer	0.00		0.00	
663B: Clare	 Poor Bottom layer Thickest layer	0.00	· -	0.00	
667B: Kaneville	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
668B: Somonauk	 Poor Bottom layer Thickest layer 	0.00	 Poor Bottom layer Thickest layer 	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	Potential as so of gravel	urce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
675B, 675C2: Greenbush	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
679B: Blackberry	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
680B: Campton	 Poor Bottom layer Thickest layer	0.00	· -	0.00	
712A: Spaulding	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
715A: Arrowsmith	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
732A, 732B: Appleriver	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
791A, 791B: Rush	 Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer	0.00	
792A, 792B: Bowes	 Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer	0.00	
794G: Marseilles	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
Northfield	 Poor Bottom layer Thickest layer 	0.00	 Poor Bottom layer Thickest layer	0.00	
Ritchey	 Poor Bottom layer Thickest layer 	0.00	Poor Bottom layer Thickest layer	0.00	
802B, 802D: Orthents, loamy	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	 Potential as so of gravel 	ource	Potential as source of sand		
	Rating class	Value	Rating class	Value	
804D, 804G: Orthents, acid	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
805B: Orthents, clayey	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
814A:	 	İ		l	
Muscatune	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	0.00	
Buckhart	Poor Bottom layer Thickest layer	0.00	Poor Bottom layer Thickest layer	0.00	
817A: Channahon	 Poor Bottom layer Thickest layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.00 0.06	
Hesch	 Poor Bottom layer Thickest layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.00 0.06	
817B: Channahon	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
Hesch	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
818A:	 		 	i	
Flanagan	 Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	
Catlin	Poor Bottom layer Thickest layer 	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00	
820E:	ĺ	ĺ		ĺ	
Hennepin	Poor Bottom layer Thickest layer 	 0.00 0.00	Poor Bottom layer Thickest layer 	0.00	
Casco	Poor Bottom layer Thickest layer	0.00	Fair Thickest layer Bottom layer	0.00	
820G: Hennepin	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol and soil name	 Potential as sou of gravel 	rce	Potential as source of sand		
	Rating class	Value	Rating class	Value	
820G: Casco	 Poor Thickest layer Bottom layer	 0.00 0.00	 Fair Thickest layer Bottom layer	 0.00 0.51	
803: Landfills	 Not rated		 Not rated		
864: Pits, quarry	 Not rated 	 	 Not rated 	 	
865: Pits, gravel	 Not rated 	 	 Not rated 	 	
969E2, 969F: Casco	Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer	0.00	
Rodman	 Fair Thickest layer Bottom layer 	 0.00 0.01	 Fair Thickest layer Bottom layer 	0.00	
1103A: Houghton	 Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	0.00	
1480A: Moundprairie	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
3073A: Ross	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
3076A: Otter	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
3082A: Millington	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
3107A: Sawmill	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	
3321A: Du Page	 Poor Bottom layer Thickest layer	 0.00 0.00	 Poor Bottom layer Thickest layer	0.00	

Table 19a.--Construction Materials--Continued

Map symbol	Potential as so	urce	Potential as source			
and soil name	of gravel		of sand			
	Rating class	Value	Rating class	Value		
3451A:						
Lawson	Poor	ĺ	Poor	ĺ		
	Bottom layer	0.00	-	0.00		
	Thickest layer	0.00	Thickest layer	0.00		
3480A:	į	į		į		
Moundprairie	1		Poor			
	Bottom layer Thickest layer		Bottom layer Thickest layer	0.00		
	Inickest layer		Inickest layer			
3800A: Psamments	 Peem		 Fair			
Psamments	Bottom layer		Bottom layer	0.97		
	Thickest layer	0.00	-	0.97		
7073A: Ross	 Doom		 Fair			
ROSS	Bottom layer	0.00	1	0.00		
	Thickest layer	0.00	-	0.05		
8073A:	 	l	 			
Ross	Poor	i	Poor	İ		
	Bottom layer	0.00	Bottom layer	0.00		
	Thickest layer	0.00	Thickest layer	0.00		
8107A:		İ				
Sawmill	1		Poor			
	Bottom layer Thickest layer		Bottom layer Thickest layer	0.00		
	Inickest layer	0.00	Thickest layer	0.00		
8151A:	 Page		l mada			
Ridgeville	Bottom layer		Fair Thickest layer	0.00		
	Thickest layer		Bottom layer	0.12		
8404A: Titus	 Doom		 Poor			
11cus	Bottom layer	0.00	1	0.00		
	Thickest layer	0.00		0.00		
8451A:						
Lawson	Poor		 Poor	i		
	Bottom layer	0.00	Bottom layer	0.00		
	Thickest layer	0.00	Thickest layer	0.00		
8516A:			 			
Faxon	Poor		Poor			
	Bottom layer	0.00	-	0.00		
	Thickest layer	0.00	Thickest layer	0.00		

Table 19b. -- Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source reclamation mater:		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23B:		 				
Blount	Poor	İ	Poor	İ	Poor	İ
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter	0.12	Wetness	0.01	Wetness	0.01
	content				Hard to reclaim	0.05
	Carbonate content	0.68			(dense layer)	
	Water erosion	0.90				
	Too acid	0.99	 		 	
51A:						
Muscatune	Fair		Poor		Fair	
	Too acid	0.84		0.00		0.14
		0.92	!	0.14	Too clayey	0.67
	Organic matter	0.92	Shrink-swell	0.99		
	content Water erosion	 0.99				
60C2:			1		 	İ
La Rose	 Roim	 	 Fair		 Fair	-
La ROSE	Organic matter	0.18	!	0.22	Hard to reclaim	0.01
	content	0.1 8	now screngen	0.22	(dense layer)	10.01
	Carbonate content	 n 8n	I I		(dense layer)	1
	!	0.99	 		 	i
				i		i
60D2:	i	İ		i		i
La Rose	Fair	İ	Fair	i	Poor	i
	Organic matter	0.12	Low strength	0.22	Hard to reclaim	0.00
	content	İ	İ	İ	(dense layer)	İ
	Carbonate content	0.46		İ	Slope	0.04
	Water erosion	0.99				
61A, 61B:		 	 		 	
Atterberry	Fair		Poor		Fair	
	Organic matter	0.18	Low strength	0.00	Wetness	0.04
	content		Wetness	0.04	Too clayey	0.55
	Too acid	0.74	Shrink-swell	0.99		
	Water erosion Too clayey	0.90 0.92				
C.T.D.		İ	 	į	 -	į
67A: Harpster	Pair	l I	Poor	1	Poor	1
marhacer	Carbonate content	 0 8 0	Poor Wetness	0.00	Poor Wetness	0.00
	!	0.92	1	0.00	!	0.72
	Water erosion	0.99		0.99		
68A:	 	 	 		 	
Sable	Fair	į	Poor	İ	Poor	i
	Organic matter	0.68	!	0.00	Wetness	0.00
				1		1
	content		Low strength	0.00	Too clayey	0.98
	content Too clayey	 0.98	Low strength Shrink-swell	0.00 0.97	Too clayey 	0.98

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86B:	 		 		 	
Osco	Fair Organic matter content	0.50	Poor Low strength Shrink-swell	0.00	Fair Too clayey 	0.64
	Too acid Too clayey Water erosion	0.84	 	 	 	
86C2:	i I	į į	 -	İ	 -	į
	Fair	i	Poor	i	Fair	ì
	Organic matter content	0.12	Low strength Shrink-swell	0.00	Too clayey	0.64
	Water erosion Too acid	0.68	 		 	
	Too clayey	0.98	 	į	 -	į
87A: Dickinson	 Fair	 	 Good		 Good	
	Organic matter	0.12		İ		İ
	Too acid	0.84		i		i
	Droughty 	0.96 	 		 	
87B:	l Rede	į	 Good	į	 	į
Dickinson	Organic matter content	0.12	GOOG 		Good 	
	Too acid	0.84				
87C2:	 	 	 		 	
Dickinson	Fair Organic matter	 0.12	Good 		Good 	
	content Too acid	 0.84	 		l	
	Droughty	0.93	 		 	
88B:						
Sparta	Poor Too sandv	0.00	Good 		Poor Too sandy	0.00
	Wind erosion	0.00		į		İ
	Organic matter content	0.60 	 			
	Too acid	0.97	 -	İ	 -	
88D:	l Dans		 Good	į	 	
Sparta	Too sandy	0.00	Good		Poor Too sandy	0.00
	Wind erosion	0.00	İ	i	Slope	0.96
	Organic matter content	0.68				
	Too acid	0.74				
91A:	 	 	[
Swygert	!	1	Poor	1	Poor	
	Too clayey Organic matter	0.00		0.00		0.00
	content Carbonate content	İ	Shrink-swell	0.14		
	Too acid	0.97				İ
	1					

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91B: Swygert	 Poor Too clayey Organic matter content Carbonate content Too acid	0.00	 Poor Low strength Wetness Shrink-swell	 0.00 0.14 0.33	·	 0.00 0.14
91B2: Swygert	 Poor Too clayey Carbonate content Organic matter content	0.00	 Poor Low strength Wetness Shrink-swell	 0.00 0.14 0.26	:	 0.00 0.14
91C2: Swygert	 Poor Too clayey Organic matter content Carbonate content Water erosion	0.00	Poor Low strength Wetness Shrink-swell	 0.00 0.14 0.47 	Wetness	 0.00 0.14 0.94
91C3: Swygert	 Poor Too clayey Organic matter content Carbonate content Water erosion	0.00	 Poor Low strength Wetness Shrink-swell	 0.00 0.14 0.69	Hard to reclaim	 0.00 0.10 0.14
103A: Houghton	 Poor Wind erosion Too acid 	 0.00 0.88 	 Poor Wetness 	 0.00 	 Poor Wetness Organic matter content	0.00
104A: Virgil	Organic matter content Water erosion Too acid	 0.68 0.90 0.97 0.98	 Poor Low strength Wetness Shrink-swell	 0.00 0.04 0.91 	 Fair Wetness Too clayey 	 0.04 0.67
105A: Batavia	 Fair Organic matter content Too acid Water erosion	 0.50 0.84 0.99	 Poor Low strength Shrink-swell	 0.00 0.99 	 Good 	
105B: Batavia	!	 0.50 0.84 0.90	 Poor Low strength Shrink-swell 	 0.00 0.98 	 Good 	

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and	Value	Rating class and	Value	Rating class and	Value	
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	İ	
105C2: Batavia	Organic matter content Too acid	 0.50 0.84 0.99	 Poor Low strength Shrink-swell 	 0.00 0.95	 Good 		
125A: Selma	 Good 	 	 Poor Wetness Shrink-swell 	 0.00 0.98 	 Poor Hard to reclaim (dense layer) Wetness	0.00	
131B: Alvin	Organic matter	0.05	 Good 	 	 Good 		
131C2:	Too acid	0.88	 	 	 		
Alvin	Fair Organic matter content Too acid	 0.12 0.88	Good - -	 	Good - -	 	
132A:							
Starks	Water erosion	 0.68 0.68 0.98 0.99	Fair Wetness 	0.04	Fair Wetness Too clayey 	0.04	
134A, 134B:	İ	i	İ	į		i	
Camden	Organic matter content Water erosion Too clayey	 0.12 0.68 0.82 0.97	Good 	 	Fair Too clayey 	 0.49 	
134C2:		İ		i		i	
Camden	Organic matter content Too clayey	 0.12 0.82 0.90 0.97	Good 	 	Fair Too clayey 	0.49	
134D2: Camden		 0.12 0.82 0.90 0.97	 Good 		 Fair Slope Too clayey 	0.04	

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134D3: Camden	Organic matter content Too acid Too clayey	 0.50 0.54 0.98	 Poor Low strength Shrink-swell 	 0.00 0.99 	· -	 0.04 0.64 0.98
134F:		 			 	
Camden	Organic matter content Too acid Too clayey	 0.50 0.54 0.98 0.99	Poor Low strength Slope 	 0.00 0.00 	· -	0.00
146A:						
Elliott	Organic matter content Carbonate content Too acid Too clayey	0.18	Wetness Shrink-swell	 0.00 0.07 0.97 	!	 0.07 0.55
146B:		İ		į	 	į
Elliott	Organic matter content Carbonate content Water erosion	0.12	Wetness Shrink-swell	 0.00 0.07 0.99 	Too clayey	 0.07 0.55 0.90
146B2:		į				į
Elliott	Organic matter content Carbonate content Too acid	0.12	Poor Low strength Wetness	 0.00 0.07 	!	 0.07 0.29 0.55
147B2:	 Parasa		l Danasa		l Parasa	
Clarence	Too clayey	0.00 0.50 0.74		 0.00 0.14 0.87 	!	 0.00 0.14 0.90
148A:	 	 	 		 	
Proctor	Organic matter	 0.12 0.84	Fair Shrink-swell	0.98	Good 	
	Too acid Water erosion	0.84 0.99 	 	 	 	

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as sourc reclamation mater	Potential as sou of roadfill	rce	Potential as source of topsoil		
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	<u> </u>	limiting features	1
148B: Proctor	Organic matter content Too clayey	0.24	 Good 	 	 Fair Too clayey 	 0.81
148C2: Proctor	 Fair Too clayey			 0.00 0.96	:	 0.81
149A: Brenton	!	 0.99 	 Fair Wetness Low strength Shrink-swell	 0.14 0.22 0.99	į	0.14
151A, 151B: Ridgeville		 0.68 0.88	 Fair Wetness 	!	 Fair Wetness 	 0.14
152A:	 	 	 		 	
Drummer	Carbonate content	0.92	Poor Wetness Low strength Shrink-swell	 0.00 0.00 0.97		0.00
154A:	İ	İ	İ	İ	İ	İ
Flanagan	Too clayey Carbonate content Too acid Organic matter content	0.18 0.68 0.84	Shrink-swell	 0.00 0.14 0.90 	Wetness	 0.13 0.14
171A:	l I	 	l	l I	l	
Catlin	Too clayey	0.82	Wetness	0.00	Wetness	0.64
171B:	[[
Catlin	Too clayey	0.82	Wetness	0.00	Wetness	0.64
171B2:						
Catlin	Too clayey	0.92	Poor Low strength Wetness Shrink-swell	0.00	Wetness	0.79

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17100						1
171C2: Catlin	 Fair	 	 Poor	1	 Fair	l I
Cuciii	Too clayey	0.82	!	0.00	!	0.70
	Too acid	0.95		0.87	:	0.95
	Water erosion	0.99	Wetness	0.95	İ	İ
171C3:	1	 	l	 	 	
Catlin	 Fair		Poor	1	 Fair	
Cuciii	Organic matter	0.32	!	0.00	1	0.95
	content		Wetness	0.95		İ
	Too acid	0.99	Shrink-swell	0.98	İ	İ
	Water erosion	0.99			İ	į
193C2:	İ	 	l I	 	 	
Mayville	Fair		 Fair	İ	 Fair	1
•		0.12	1	0.98	!	0.10
	content	İ		į	(dense layer)	İ
	Too acid	0.84		ĺ	Wetness	0.98
	Water erosion	0.90				
	Carbonate content	0.99				
198A:	 	 	 		 	
Elburn	Fair	i	Poor	İ	Fair	i
	Too clayey	0.98	Low strength	0.00	Wetness	0.14
	Water erosion	0.99	Wetness	0.14	Too clayey	0.81
			Shrink-swell	0.99		
199A:	 	 	 		 	
	Fair	i	Poor	İ	Fair	İ
	Organic matter	0.68	Low strength	0.00	Too clayey	0.67
	content	ĺ	Shrink-swell	0.98		ĺ
	Too acid	0.97				
	Too clayey	0.98			!	
	Water erosion	0.99	l	 	 	
199B:	[[
Plano	Fair	į	Poor	į	Fair	j
	Organic matter	0.68	Low strength	0.00	Too clayey	0.67
	content		Shrink-swell	0.99		
	Too acid	0.92				
	Too clayey Water erosion	0.98	 	1	 	
	Water erosion		 		 	
199C2:	İ	İ	İ	İ	İ	į
Plano	!	:	Poor		Fair	
	Organic matter	0.68		0.00	Too clayey	0.67
	content Too acid		Shrink-swell	0.99		
	Too clayey	0.97 0.98	 	l I	 	l I
	Water erosion	0.99			 	
	ļ				!	1
206A:	 Enim		 Doom		 Deem	
Thorp	Fair Organic matter	 0.68	Poor Wetness	0.00	Poor Wetness	0.00
	content		Low strength	0.00	Hechess	
	Water erosion	0.90		0.99		1
	Too acid	0.97			į	i
	i	i	i İ	i	i	í

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as source		Potential as source of topsoil	
	Rating class and limiting features	:	Rating class and limiting features	1	Rating class and limiting features	Value
210A: Lena	!	 0.00 0.80 	!			 0.00 0.00 0.80
219A: Millbrook	Organic matter content	0.12	 Poor Low strength Wetness Shrink-swell			 0.04
223B: Varna	Too clayey Carbonate content Water erosion	0.00	 Poor Low strength Shrink-swell Wetness	 0.00 0.97 0.98	Wetness	 0.00 0.98
223B2: Varna	Too clayey Organic matter content	0.08 0.12 0.90	Wetness Shrink-swell	0.00		 0.06 0.98 0.99
223C2: Varna	 Fair Too clayey Organic matter content Carbonate content Water erosion	0.08	Shrink-swell Wetness	 0.00 0.95 0.98	Wetness	 0.06 0.98
223C3: Varna	Organic matter content Too clayey	0.12 0.76 0.90	Wetness		Too clayey	 0.00 0.44 0.98
223D2: Varna	Too clayey Organic matter content	0.08 0.12 0.90		 0.00 0.98 	Hard to reclaim (dense layer) Slope	 0.06 0.94 0.96 0.98
223D3: Varna	Organic matter	0.24 0.68 0.90	Wetness		Too clayey Slope	 0.00 0.41 0.96 0.98

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						İ
228B: Nappanee	Poor	 	 Poor		 Poor	
••	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter	0.24	Wetness	0.04	Wetness	0.04
	content		Shrink-swell	0.87		!
	Carbonate content Water erosion	0.68 0.99	 		 	
	water erosion	0.33			 	
228C2:	į	į	į	į	ĺ	į
Nappanee		!	Poor	!	Poor	
	Too clayey	0.00	Low strength	0.00		0.00
	Organic matter	0.12	Wetness Shrink-swell	0.04	!	0.04
	Carbonate content	0.68	billink-bwell		(dense layer)	0.05
	Droughty	0.87		İ		i
	Water erosion	0.99	İ	İ	İ	İ
228C3:		 	l	l I	l I	
Nappanee	Poor	 	Poor	l I	Poor	1
	Too clayey	0.00	Low strength	0.00	!	0.00
	Organic matter	0.12	Wetness	0.04	Hard to reclaim	0.00
	content		Shrink-swell	0.87	(dense layer)	
	Droughty	0.17			Wetness	0.04
	Carbonate content	!				
	Water erosion	0.99 	 		 	
232A:		İ		İ		İ
Ashkum	Poor	!	Poor	!	Poor	
	Too clayey	0.00	!	0.00	!	0.00
	Organic matter	0.18	Low strength Shrink-swell	0.00	Too clayey	0.00
	Carbonate content	 0.97	SHITHK-SWEIT	0.00	 	1
	Water erosion	0.99				İ
233A: Birkbeck	 Fair	 	 Poor		 Fair	
	Organic matter	0.50	!	0.00	1	0.54
	content	j	Wetness	0.89	Wetness	0.89
	Water erosion	0.68	Shrink-swell	0.91		
	Too acid	0.74		ļ		!
	Too clayey Carbonate content	0.82	 		 	
	carbonate content	0.95	 		 	
233B:	İ	İ	İ	İ	İ	į
Birkbeck	1	'	Poor	:	Fair	
	1	'	Low strength	0.00	Too clayey Wetness	0.49
	Organic matter content	0.10 	Wetness	0.78	•	0.89
	!	0.68	!			
	1	0.82	•	İ	İ	i
	Carbonate content	0.95	į	į	į	į
233C2:		 	 		 	
Birkbeck	Fair		Poor		 Fair	
	Organic matter	0.50	!	0.00	Wetness	0.89
	content		Wetness	0.89		
	Too acid	0.88	•	0.96		ļ
	Water erosion	0.90	1	1	I	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u>i</u>	limiting features	<u>i</u>	limiting features	<u>i </u>
234A:	 	 	 		 	
Sunbury	 Fair		 Fair		Fair	i
	Organic matter	0.05	l .	0.04		0.04
	content	İ	Shrink-swell	0.88	Too clayey	0.11
	Too clayey	0.18		İ	Hard to reclaim	0.94
	Water erosion	0.68		İ	(dense layer)	i
	Too acid	0.84		ĺ		İ
	Carbonate content	0.92	 			
235A:	 		 		 	
Bryce	Poor		Poor		Poor	
	Too clayey	0.00	Wetness	0.00	Too clayey	0.00
	Too acid	0.97	Low strength	0.00	Wetness	0.00
	Carbonate content	0.97	Shrink-swell	0.14	 	
236A:			 		 	
Sabina	Fair		Poor		Poor	
	Too clayey	0.08	Low strength	0.00	Hard to reclaim	0.00
	Water erosion	0.37	Wetness	0.04		
	Organic matter	0.50 	Shrink-swell 	0.56 	Wetness Too clayey	0.04
	Too acid	0.88		ĺ	İ	İ
	Carbonate content	0.92		į		į
238A:		 		 	 	
Rantoul	Poor	į	Poor	İ	Poor	į
	Too clayey	0.00	Wetness	0.00	Too clayey	0.00
			Low strength	0.00	Wetness	0.00
	l		Shrink-swell	0.12	 	
241C3:			 		 	
Chatsworth	Poor	ĺ	Poor	ĺ	Poor	İ
	Too clayey	0.00	Low strength	0.00	Hard to reclaim	0.00
	Droughty	0.00	Wetness	0.68	(dense layer)	
	Organic matter	0.12	Shrink-swell	0.87	Too clayey	0.00
	content				Wetness	0.68
	Carbonate content					1
	Water erosion	0.99 	 		 	
241D3:						
Chatsworth	Poor		Poor		Poor	
	Droughty	0.00	Low strength	0.00		0.00
	Too clayey	0.00	Wetness	0.68	Hard to reclaim	0.03
		0.12	Shrink-swell	0.87	(dense layer)	
	content		1		Wetness	0.68
	Carbonate content Water erosion	0.97			Slope 	0.96
		į		į		į
	Poor	 	 Poor		 Poor	
241E3:		!	Low strength	0.00	Too clayey	0.00
241E3: Chatsworth	!	0.00				1 - 3 - 3
	Too clayey	0.00	Wetness	0.68	:	0.00
	!	0.00 0.02 0.12		0.68	Slope Hard to reclaim	0.00
	Too clayey Droughty	0.02	Wetness	!	Slope Hard to reclaim	
	Too clayey Droughty Organic matter	0.02	Wetness Shrink-swell	0.87	Slope Hard to reclaim	

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	İ	limiting features	İ
241E						
241F: Chatsworth	Poor		 Poor	1	 Poor	-
Chatswort chi	Too clayey	0.00	Low strength	0.00		0.00
	Droughty	0.03		0.00	: -	0.00
	Organic matter	0.12	Wetness	0.68		0.10
	content	į	Shrink-swell	0.87	(dense layer)	İ
	Carbonate content	0.97			Wetness	0.68
241G:		!		ļ		!
Chatsworth	!	!	Poor	!	Poor	
	Too clayey Droughty	0.00		0.00	: -	0.00
	Organic matter	0.12	Wetness	0.68		0.00
	content		Shrink-swell	0.87		
	Carbonate content	0.97			Wetness	0.68
	Water erosion	0.99		İ		i
		į	İ	į	j	į
242A:						
Kendall	!	!	Poor	!	Fair	
	Organic matter	0.12		0.00		0.04
	content		Wetness	0.04		0.57
	Too acid Water erosion	0.61	1	0.95	Too acid	0.99
	Too clayey	0.88	!	l I	 	1
	100 clayey			İ		i
243A:		i		İ		i
St. Charles	Fair	į	Poor	į	Fair	į
	Organic matter	0.12	Low strength	0.00	Too clayey	0.57
	content		Shrink-swell	0.94		
	Too acid	0.88		ļ		!
	Water erosion	0.90				-
	Too clayey	0.98	l I		 	
243B:		 	 	l I	 	1
St. Charles	Fair	 	Poor	İ	 Fair	i
	Organic matter	0.12	!	0.00		0.57
	content	İ	Shrink-swell	0.95	į	i
	Too acid	0.88				
	Water erosion	0.90				
	Too clayey	0.98		ļ		!
243C2:						-
St. Charles	 Roim		 Doom		 Fair	
St. Charles	Organic matter	0.12	Poor Low strength	0.00		0.57
	content		Shrink-swell	0.99	100 clayey	
	Too acid	0.88				i
	Water erosion	0.90		į	İ	i
	Too clayey	0.98		ĺ		İ
	[[[1
244A:						1
Hartsburg	!	:	Poor	:	Poor	
	Organic matter	0.18	!	0.00		0.00
	content Water erosion	 0.68	Low strength	0.00	Too clayey	0.82
	Carbonate content	1	 		 	1
	Too clayey	0.82	1 	i i	1	1
	100 Clayey	0.04		1		1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as sourc reclamation mater		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	 Rating class and limiting features	Value	Rating class and limiting features	Value
278A:			 		 	
Stronghurst	Fair		Poor		Fair	
	Water erosion	0.68	Low strength	0.00	!	0.04
	Organic matter	0.88	Wetness	0.04	Too clayey	0.70
	content		Shrink-swell	0.97		
	Too acid Too clayey	0.97 0.98	 		 	
278B:	 		 		 	
Stronghurst	Fair	i	Poor	i	Fair	İ
_	Organic matter	0.88	Low strength	0.00	Wetness	0.04
	content		Wetness	0.04	Too clayey	0.70
	Water erosion	0.90	Shrink-swell	0.96		
	Too acid	0.97				
	Too clayey	0.98	 		 	
279B:		į		į		
Rozetta		1	Poor		Fair	
	Organic matter	0.12	Low strength Shrink-swell	0.00	Too clayey	0.57
	content Water erosion	0.68	Shrink-swell	0.92	 	
	Too acid	0.68	 		 	l
	Too clayey	0.98				
280C2:						
Fayette	Fair	i	Poor	İ	Fair	İ
	Organic matter	0.12	Low strength	0.00	Too clayey	0.57
	content		Shrink-swell	0.87		
	Too acid	0.68				
	Water erosion	0.90				
	Too clayey	0.98	 		 	
290A:		į		į		į
Warsaw	Fair		Good		Poor	
	Organic matter content	0.12	l I		Hard to reclaim (rock fragments)	0.00
	Carbonate content	10 92	 		(fock fragments)	
	Too acid	0.92				
290B:			 			
Warsaw	Fair	İ	Good	İ	Poor	i
	Organic matter	0.12	İ	İ	Hard to reclaim	0.00
	content				(rock fragments)	
	Too acid	0.84				
	Carbonate content	0.92	 		 	
290C2:						
Warsaw	!		Good		Poor	
	Too sandy	0.00	 	1		0.00
	Organic matter content	0.12	 	I		0.00
	content Carbonate content	0 92	 	1	hard to reclaim (rock fragments)	10.00
	Too acid	0.95	1 		(100k 11agments)	
	Droughty	0.98	! 	i	! 	
	1	1	I .	1	l .	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	rce	Potential as sou of topsoil	irce
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
293A: Andres	Organic matter content Too clayey Carbonate content	0.18 0.82	Wetness	 0.00 0.12 0.96	Too clayey	 0.12 0.64
293B: Andres	Too clayey Carbonate content	0.82	Wetness	 0.00 0.12 0.97	!	 0.12 0.64
294B: Symerton		0.12 0.84 0.90	 Poor Low strength Wetness	0.00		 0.12 0.99
294C2: Symerton		0.68 0.84	 Fair Wetness Shrink-swell 	0.93	 Fair Wetness 	0.93
295A: Mokena	 Fair Too clayey Carbonate content 	0.82		0.00	!	 0.14 0.64 0.99
295B: Mokena		0.12	 Poor Low strength Wetness Shrink-swell	 0.00 0.14 0.81	 Fair Wetness 	 0.14
298B: Beecher	Too clayey Organic matter content Carbonate content Too acid	0.02	!	 0.00 0.00 		 0.00 0.01 0.94
311B: Ritchey	Poor Depth to bedrock Droughty Organic matter content Too clayey Water erosion	!	Low strength	!		 0.00 0.67

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
314A: Joliet	Depth to bedrock	!	Wetness	 0.00 0.00 0.00	 Poor Wetness Depth to bedrock	 0.00 0.00
315B: Channahon	Depth to bedrock		Low strength		 Poor Depth to bedrock 	 0.00
317A: Millsdale	Depth to bedrock		Wetness Low strength	0.00	 Poor Wetness Depth to bedrock	0.00
318B: Lorenzo	Too sandy Organic matter content Carbonate content	0.00	 Good 	 	Rock fragments	0.00
318C2: Lorenzo	Too sandy Organic matter content	0.00	 Good 	 	Rock fragments	
320B: Frankfort	Too clayey Organic matter content Carbonate content	0.00	Wetness Shrink-swell	 0.00 0.04 0.89	Wetness	 0.00 0.04 0.97
320C2: Frankfort	Too clayey Organic matter content Droughty Carbonate content	0.00 0.12 0.80	 Poor Low strength Wetness Shrink-swell	 0.00 0.04 0.87 	Wetness	 0.00 0.04 0.71
325B, 325C2: Dresden	!	 0.12 0.46	 Good 	 	 Poor Hard to reclaim (rock fragments) 	 0.00

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u>i </u>
327B:	 	 	 	 	 	
Fox	 Fair	! 	Good	i	Poor	i
	Organic matter	0.12		i	Hard to reclaim	0.00
	content	ĺ		ĺ	(rock fragments)	İ
	Carbonate content	0.68			Too clayey	0.53
	Too clayey	0.92				
	Water erosion	0.99				
327C2:	 	 	 		 	
Fox	Poor	İ	Good	i	Poor	i
	Too sandy	0.00	j	į	Too sandy	0.00
	Organic matter	0.12			Rock fragments	0.00
	content				Hard to reclaim	0.00
	Carbonate content	!			(rock fragments)	!
	Droughty	0.99				
327D2:	 	 	 		 	
Fox	Fair	! 	Good		Poor	i
	Organic matter	0.12	İ	į	Hard to reclaim	0.00
	content	ĺ		ĺ	(rock fragments)	İ
	Carbonate content	0.68			Too clayey	0.53
	Too clayey	0.92			Slope	0.96
330A:	 	 	 	1	 	
Peotone	Poor	 	Poor	İ	Poor	i
	!	0.00	!	0.00		0.00
	= =	0.99	!	0.00	Too clayey	0.00
	[Shrink-swell	0.12	[
344A:	 	 	 			
Harvard	 Fair	 	Poor	 	 Good	
nai vai a	!	0.68	!	0.00		i
	content		Shrink-swell	0.90		i
	Too acid	0.97	İ	į	į	İ
	Water erosion	0.99	[[
2447						
344B: Harvard	 Fair	 	 Fair	l I	 Good	
narvaru	Organic matter	0.12	!	0.78		i
	content		Shrink-swell	0.90		i
	Too acid	0.97	İ	į	İ	İ
	Water erosion	0.99	[[
24460						
344C2: Harvard	Pair	 	 Poor		 Good	
narvaru	!	0.68	!	0.00		i
	content		Shrink-swell	0.99		i
	Too acid	0.97		i		i
	Water erosion	0.99	j	İ	į	İ
356A:	 Poim	 	 Doors		 Doors	
Elpaso	!	 0.24	Poor Wetness	0.00	Poor Wetness	0.00
	content	0.24 	wetness Low strength	0.00		0.00
	Too acid	0.92		0.87	100 Clayer	
	Too clayey	0.98			İ	i
	Carbonate content		İ	İ	į	i
	Water erosion	0.99		İ	İ	İ
	I	I	I	I	I .	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
			Rating class and limiting features	1	Rating class and limiting features	Value
375A: Rutland	Too clayey Too acid Carbonate content	0.00 0.97	Wetness	 0.00 0.14 0.28	Wetness	 0.00 0.14
375B: Rutland	!	0.00	Wetness Shrink-swell	 0.00 0.14 0.16	Wetness	 0.00 0.14
375B2: Rutland	Too clayey	0.02	Shrink-swell	 0.00 0.12 0.14	Wetness	 0.02 0.14
388B: Wenona	Too clayey Too acid Carbonate content	0.05	Shrink-swell	0.00	Wetness	0.04
388B2, 388C2: Wenona	Too clayey Too acid Carbonate content	0.05	Shrink-swell	 0.00 0.12 0.98	Wetness	 0.04 0.98
397F: Boone	Poor Poor Wind erosion Droughty Depth to bedrock Organic matter content Too sandy Too acid	0.00	: -		· -	 0.00 0.05 0.22 0.88
413B: Gale	!	0.68	:		 Fair Depth to bedrock 	 0.97
413C2: Gale	!	0.68 0.68 0.88	:		 Fair Depth to bedrock 	 0.99

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features		limiting features	<u> </u>
435A:		 	 		 	1
Streator	Poor	! 	Poor	İ	Poor	i
	Too clayey	0.00	Wetness	0.00	Wetness	0.00
	Carbonate content	0.97	Low strength	0.00	Too clayey	0.00
	Water erosion	0.99	Shrink-swell	0.12		
448B:		 	 		 	
Mona	Fair	İ	Poor	İ	Fair	i
İ	Organic matter	0.24	Low strength	0.00	Wetness	0.98
ļ	content		Shrink-swell	0.83		
	Carbonate content	0.97	Wetness	0.98		
448C2:		 	 		 	
Mona	Fair	İ	Poor	İ	Fair	i
	Organic matter	0.24	Low strength	0.00	Hard to reclaim	0.97
	content		Shrink-swell	0.83	(dense layer)	
ļ	Carbonate content	!	Wetness	0.98	Wetness	0.98
	Water erosion	0.99	 		 -	
512B:		 	 		 	
Danabrook	Fair	İ	Poor	İ	Fair	i
İ	Carbonate content	0.46	Low strength	0.00	Wetness	0.98
	Water erosion	0.99	Shrink-swell	0.97		
		l I	Wetness	0.98		
512C2:		 	 		 	
Danabrook	Fair	! 	Fair	İ	 Fair	i
į	Organic matter	0.24	Wetness	0.98	Wetness	0.98
	content		Shrink-swell	0.99		
	Carbonate content	'				ļ
	Too acid	0.97				
	Water erosion	0.99 	 		 	
516A:				İ		
Faxon	Fair		Poor		Poor	Ì
	Too acid	0.61	: -	1	1	0.00
	Depth to bedrock		:	0.00	:	
	Organic matter content	0.96	Low strength	0.00	Too acid	0.99
527C2:		İ	İ	İ	İ	j
Kidami	Fair		Poor	1	Fair	1
	Carbonate content			0.00	Wetness	0.98
	Organic matter content	0.68	Wetness	0.98	 -	
	Too acid	 0.97	 	 	 	
		İ		İ	İ	İ
527D2:						
Kidami			Fair	1	Fair	
	Organic matter content	0.12	Wetness	0.98	Hard to reclaim (dense layer)	0.90
	Content Carbonate content	0.16	 	1	(dense layer) Slope	0.96
l l	Jarromace content	'	!	!		
i	Too acid	0.97			Wetness	0.98

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	rce	Potential as sou of topsoil	irce
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
530B:		 	 		 	
Ozaukee	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Too clayey	0.19
	content		Wetness	0.98	Wetness	0.98
	Too clayey	0.32	Shrink-swell	0.99	Not hard to	0.99
	Carbonate content	0.68			reclaim	
	1	0.90				1
	Too acid	0.95	 	l I	 	
530C2:						
Ozaukee	Fair		Poor		Fair	
	Too clayey	0.02	Low strength	0.00	Too clayey	0.01
	Organic matter	0.12	Wetness	0.68	Hard to reclaim	0.35
	content	!			(dense layer)	
	Carbonate content	!			Wetness	0.68
	Water erosion	0.90	 	l I	l I	
530C3:						
Ozaukee	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Hard to reclaim	0.29
	content		Wetness	0.95	(dense layer)	
	Carbonate content				Too clayey	0.57
		0.90			Wetness	0.95
	Too clayey	0.98	 		Rock fragments	0.97
530D2:						
Ozaukee	Fair		Poor		Fair	
	Too clayey	0.02	Low strength	0.00	Too clayey	0.01
	Organic matter	0.12	Wetness	0.68	Hard to reclaim	0.35
	content	!			(dense layer)	
	Carbonate content	!			Wetness	0.68
	Water erosion Too acid	0.90 0.95	 	l I	Slope	0.96
530D3:	į.	ĺ		į		Ì
Ozaukee			Poor	!	Fair	
	Organic matter	0.12	Low strength	0.00	!	0.16
	content Carbonate content	10 60	Wetness	0.53	(dense layer) Wetness	0.53
		0.90	 	l I	Too clayey	0.57
	Too clayey	0.98	 	l I	Slope	0.96
					Rock fragments	0.97
530E2: Ozaukee	 Fair	 	 Poor	 	 Poor	
014400		0.02	!	0.00	Slope	0.00
		0.12		0.68	· -	0.01
	content	İ	Slope	0.98	:	0.65
	Carbonate content	0.68	i -	İ	(dense layer)	i
	Water erosion	0.90		į	Wetness	0.68
	1		 		 	
530F:			i .	1	i .	1
530F: Ozaukee	 Fair	 	Poor		Poor	
		 0.02	!	0.00	 Poor Slope	0.00
	Too clayey	 0.02 0.24	Low strength	 0.00 0.00	Slope	0.00
	Too clayey		Low strength	!	Slope Too clayey	
	Too clayey Organic matter	0.24	Low strength	0.00	Slope Too clayey	0.01

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as sou of topsoil	rce
	 Rating class and limiting features	Value	 Rating class and limiting features	Value	 Rating class and limiting features	Value
541B:						Ī
Graymont	 Fair	l I	Poor	 	 Fair	-
or ay morre	Organic matter	0.12	:	0.00	!	0.98
	content		Wetness	0.98	•	
	Water erosion	0.90	Shrink-swell	0.99	İ	i
	Carbonate content	0.97		İ		ĺ
	Too acid	0.99			[
54170						
541B2: Graymont	 Fair	 	 Poor	 	 Fair	l I
Graymone	Organic matter	0.08	Low strength	0.00	!	0.98
	content		Shrink-swell	0.87		
	Water erosion	0.90	Wetness	0.98		i
	Carbonate content	0.97		į		j
	!	ļ			[
541C2:			 Dane			
Graymont		 0.12	Poor Low strength	0.00	Fair Wetness	0.89
	content	0.12	Wetness	0.89	wechess	10.03
	!	0.90	Shrink-swell	0.99	 	i
	Carbonate content	!				i
	j	İ	İ	į	İ	İ
542A:						
Rooks	!	:	Poor	!	Fair	
	Too clayey	0.50		0.00	:	0.14
	Carbonate content Water erosion	0.68	Wetness	0.14	Too clayey	0.50
	Water erosion		 		 	
542B:		İ		İ		İ
Rooks	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Wetness	0.14
	content		Wetness	0.14	Too clayey	0.39
	Too clayey	0.50				ļ
	Carbonate content	!	 		 	
	Water erosion	0.99 	 	 	 	1
549B:	 	 	 		 	
Marseilles	Fair	į	Poor	İ	Good	İ
	Too acid	0.50	Low strength	0.00		
	Water erosion	0.68	Depth to bedrock	0.00		
	Organic matter	0.88	Shrink-swell	0.87		
	content		 -		 	
549C2:	 	 	 	 	 	
Marseilles	Fair		Poor		 Fair	i
	Depth to bedrock	'	Depth to bedrock	0.00	Depth to bedrock	0.21
	Too acid	0.50		0.00	Too clayey	0.43
	Too clayey	0.59	Shrink-swell	0.87	Too acid	0.88
	Droughty	0.69				
	Organic matter	0.88				
	content Water erosion	 0.90	 		 	
	Mater erosion	0.90	I	1	!	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as sou of topsoil	irce
		Value		Value	Rating class and	Valu
	limiting features	<u> </u>	limiting features	1	limiting features	<u> </u>
549D2:	 	 	 	 		
Marseilles	Fair	İ	Poor	İ	Fair	i
	Organic matter	0.12	Depth to bedrock	0.00	Slope	0.04
	content		Low strength	0.00	Depth to bedrock	0.29
	Depth to bedrock	0.29	Shrink-swell	0.87	Too clayey	0.39
	Too acid	0.50			Too acid	0.88
	Droughty	0.50				
	Too clayey	0.68	 -		 	
	Water erosion	0.99 	 	l I	 	
549F:	 	 	 			
Marseilles	Fair	İ	Poor	İ	Poor	i
	Organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
	content		Low strength	0.00	Too clayey	0.39
	Too acid	0.50	Slope	0.00	·	0.88
	Too clayey	0.68	Shrink-swell	0.87	Depth to bedrock	0.90
	Depth to bedrock					
	Droughty	0.99	 			
	Water erosion	0.99	 	l I	 	
549G:		 	 	 		1
Marseilles	Fair	İ	Poor	İ	Poor	i
	Organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
	content	ĺ	Slope	0.00	Too clayey	0.39
	Too acid	0.50	Low strength	0.00	Too acid	0.88
	Too clayey	0.68	Shrink-swell	0.87	Depth to bedrock	0.90
	Water erosion	0.90				
	Depth to bedrock		 			
	Droughty	0.99	 	l I	 	i i
554B:			! 			1
Kernan	Fair	İ	Poor	İ	Fair	i
	Too clayey	0.02	Low strength	0.00	Too clayey	0.01
	Too acid	0.61	Wetness	0.04	Wetness	0.04
	Water erosion	0.68	Shrink-swell	0.17		0.94
		0.68			(dense layer)	
	content Carbonate content				Too acid	0.99
	Carbonate content	10.97	 	l I	 	
560D2:			! 			1
St. Clair	Poor	İ	Poor	İ	Poor	i
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter	0.12	Shrink-swell	0.87	Hard to reclaim	0.03
	content		Wetness	0.98	· -	
	Carbonate content			ļ	Slope	0.96
	Droughty	0.91			Wetness	0.98
	Water erosion	0.99	 	 		
560E:	 	 	 	l I	 	1
St. Clair	Poor	i	Poor	İ	Poor	i
	Too clayey	0.00	Low strength	0.00	·	0.00
	Organic matter	0.12	Wetness	0.68	Slope	0.00
	content		Shrink-swell	0.87	!	0.20
	Droughty	0.28	Slope	0.98	· -	1
	Carbonate content				Wetness	0.68
	Water erosion	0.99				1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as sou	irce
	Rating class and limiting features		Rating class and limiting features	1	Rating class and limiting features	Value
567B: Elkhart	!	0.68	 Poor Low strength	 0.00	 Good 	
572A: Loran	·	 0.90 	 Poor Low strength Wetness Depth to bedrock Shrink-swell	0.00	į	 0.14
572B: Loran	!	 0.99 	 Poor Low strength Wetness Depth to bedrock Shrink-swell	0.00	!	 0.14
572C2: Loran	!	 0.99 	Poor Low strength Depth to bedrock Wetness Shrink-swell	0.00		 0.14
614A: Chenoa	Organic matter content Too clayey Carbonate content	0.12	Wetness Shrink-swell	0.00	Wetness	 0.14 0.14
614B: Chenoa	Organic matter content Carbonate content Too acid	0.18	Wetness	 0.00 0.14 0.87	!	 0.14
662B: Barony	Organic matter content Too acid	 0.68 0.97 0.99	Wetness	 0.92 0.98 	 Fair Wetness 	 0.98
663B: Clare	Too clayey	0.82	 Poor Low strength Wetness Shrink-swell	0.00	Wetness	 0.68 0.98
667B: Kaneville	Organic matter		 Poor Low strength Shrink-swell Wetness	 0.00 0.94 0.98	į	 0.98

Table 19b.--Construction Materials--Continued

Map symbol and soil name	 Potential as sourc reclamation mater 		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
668B: Somonauk	 Fair Organic matter content Water erosion Too acid	 0.08 0.90 0.97	 Fair Shrink-swell Wetness 	 0.91 0.98 	 Fair Wetness 	 0.98
			į	į		į
675B: Greenbush	Fair Organic matter content Too acid Too clayey Water erosion	 0.88 0.97 0.98 0.99	 Poor Low strength Shrink-swell 	 0.00 0.91 	 Fair Too clayey 	 0.70
675C2:	 	 	 			
Greenbush	Fair Organic matter content Too acid Too clayey Water erosion	0.88	Poor Low strength Shrink-swell	0.00	Fair Too clayey 	 0.70
679B:						İ
Blackberry	Fair Organic matter content Too acid Too clayey Water erosion	 0.68 0.92 0.92 0.99	Wetness Shrink-swell	 0.00 0.98 0.98 	Wetness	 0.63 0.98
680B:	 	 	 		 	
Campton	Fair Organic matter content Too acid Water erosion	 0.50 0.88 0.90	Shrink-swell	 0.00 0.94 0.98		 0.98
712A:	 	 	 		 	
Spaulding	Organic matter content Carbonate content Too clayey	0.12	•	0.00	Carbonate content	 0.00 0.73 0.98
715A:	 					
Arrowsmith	!	0.12	Low strength	 0.14 0.22 	'	 0.14 0.72

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	<u> </u>	limiting features	<u> </u>
732A:	 	 	 		 	
Appleriver	Fair	 	Poor		 Fair	i
	Too acid	0.84	Low strength	0.00	Wetness	0.14
	Organic matter	0.88	Wetness	0.14	Too clayey	0.70
	content		Depth to bedrock	!		
	·	0.90	Shrink-swell	0.87		
	Too clayey	0.98]	 	 	
732B:	 	 		 	 	
Appleriver	Fair	İ	Poor	İ	Fair	i
	Organic matter	0.12	Low strength	0.00	Wetness	0.14
	content		Wetness	0.14	Too clayey	0.70
	Too acid	0.74	!	0.91		1
	Water erosion	0.90	Depth to bedrock	0.99		ļ
	Too clayey	0.98			 	
791A, 791B:		 	 	l I	 	
Rush	Fair	! 	Poor		 Fair	i
	Water erosion	0.68	Low strength	0.00	Hard to reclaim	0.68
	Too acid	0.68	Shrink-swell	0.98	(rock fragments)	İ
	Carbonate content	0.80				
	Organic matter	0.88		ļ		
	content	 	l			
792A:	 	 		 	 	
Bowes	Fair	! 	Poor	İ	 Fair	i
	Carbonate content	0.68	Low strength	0.00	Hard to reclaim	0.32
	Organic matter	0.68	Shrink-swell	0.96	(rock fragments)	
	content				Too clayey	0.67
	Too acid	0.74				ļ
	!	0.90			 	
	Too clayey	0.98 	 	l I	 	
792B:		 	 		! 	i
Bowes	Fair	İ	Poor	İ	Fair	i
	Carbonate content	0.68	Low strength	0.00	Hard to reclaim	0.08
	Organic matter	0.68	Shrink-swell	0.98	(rock fragments)	
	content			ļ	Too clayey	0.67
	Too acid	0.74			 	
	Too clayey Water erosion	0.98 0.99	 	l I	 	
			 		! 	i
794G:		İ		İ		į
Marseilles	Fair		Poor		Poor	
	Organic matter	0.12	Depth to bedrock	:	Slope	0.00
	content		Slope	0.00	:	0.39
	Too acid	0.50	Low strength	0.00	!	0.88
	Too clayey Water erosion	0.68 0.90	Shrink-swell	0.87	Depth to bedrock	0.90
	!	0.90			 	
	Droughty	0.99		İ		i
	į .			İ	İ	İ
Northfield	·	'	Poor		Poor	
	Depth to bedrock		Depth to bedrock	:	Slope	0.00
	Droughty	0.00	Slope	0.00	Depth to bedrock	0.00
	Too acid Organic matter	0.68 0.92	 	 	 	1
	content	U.JZ 	 	 	 	
		!	I :	!	!	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as sourc reclamation mater		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
794G:	 		 	 	 	
Ritchey	Poor		Poor	i	Poor	
	Depth to bedrock	0.00	Depth to bedrock	0.00	Slope	0.00
	Droughty	0.06	Slope	0.00	Depth to bedrock	0.00
	Water erosion	0.99	Low strength	0.00	l	
802B:			 	i	 	
Orthents, loamy	Fair	İ	Poor	İ	Good	İ
	Organic matter	0.68		0.00		
	content Water erosion	0.90	Shrink-swell	0.87	 	
	water erosion	0.90	 	İ	 	
802D:	j	i	İ	į	İ	İ
Orthents, loamy		!	Poor		Fair	
	Organic matter	0.68	Low strength Shrink-swell	0.00	Slope	0.96
	Water erosion	0.90	SHITHK-SWEIT	0.87	 	İ
			İ	į		
804D:	ļ.	1	!	ļ	!	
Orthents, acid	!	!	Poor		Poor	
	Too clayey Organic matter	0.00	Low strength Shrink-swell	0.00	Too clayey Too acid	0.00
	content				Rock fragments	0.88
	Too acid	0.50	İ	į	Slope	0.99
				ļ		
804G: Orthents, acid	Poor		 Poor		 Poor	
orthenes, acra	Too clayey	0.00	Low strength	0.00	Slope	0.00
	Organic matter	0.00		0.00	Too clayey	0.00
	content	[Shrink-swell	0.87	Too acid	0.00
	Too acid	0.50	 	l	Rock fragments	0.88
805B:			 	i	! 	
Orthents, clayey	Poor	İ	Poor	İ	Poor	İ
	Too clayey	0.00		0.00	•	0.00
	Droughty Organic matter	0.50	!	0.12	(dense layer) Wetness	0.00
	content		Wechess		Too clayey	0.00
	Water erosion	0.90	İ	į	j	i
	!			ļ		
814A: Muscatune	Pair		 Poor		 Fair	
muscacune	Too acid	0.84		0.00	:	0.14
	Too clayey	0.92		0.14	Too clayey	0.67
	Organic matter	0.92	Shrink-swell	0.99		
	content		 		 	
	Water erosion	0.99	 		 	
Buckhart	Fair	İ	Poor	İ	Fair	
	Organic matter	0.68		0.00	Too clayey	0.67
	content		Shrink-swell	0.87	Wetness	0.98
	Too clayey Water erosion	0.98	Wetness	0.98	 	
817A:	İ	İ	İ	İ	İ	İ
Channahon	!	1	Poor		Poor	
	Depth to bedrock	1	Depth to bedrock	0.00	Depth to bedrock	0.00
	Droughty Too acid	0.00	 	 	 	
	1	, 5.51	I .	1	I .	1

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater		Potential as sou of roadfill	rce	Potential as sou of topsoil	rce
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
817A:		 	 		 	
Hesch		:	Poor		Fair	
	Too acid	0.61	Depth to bedrock	0.00	Depth to bedrock	0.71
	Droughty	0.66				
	Organic matter content	0.68	 	l I	 	
	Depth to bedrock	0.71				
17B:	 	 	l I		l I	
Channahon	Poor	 	Poor	i	Poor	
	Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Depth to bedrock	:	_	i	Rock fragments	0.99
	Organic matter	0.68	į	į	į	į
	content					
	Too acid	0.97 	 		 	
Hesch	Fair	į	Poor	į	Fair	İ
	Depth to bedrock	0.05	Depth to bedrock	0.00	Depth to bedrock	0.05
	Droughty	0.11				
	Organic matter content	0.68 	 		 	
	Too acid	0.99		į	į	į
18A:		 	 		 	
Flanagan	Fair	į	Poor	į	Fair	İ
	Too clayey	0.18	Low strength	0.00	Too clayey	0.13
	Carbonate content	0.68	Wetness	0.14	Wetness	0.14
	Too acid	0.84	Shrink-swell	0.90	!	!
	Organic matter content	0.88	 		 	
	Water erosion	0.99				
Catlin	Fair	 	Poor		 Fair	
Cuttin	Too clayey	0.82	!	0.00		0.64
	Too acid	0.97		0.96	:	0.98
	Water erosion	0.99	Wetness	0.98	į	į
20E:	 	 	 		 	
Hennepin	Fair	İ	Fair	į	Poor	i
	Organic matter	0.12	Low strength	0.22	Hard to reclaim	0.00
	content		Slope	0.32	(dense layer)	
	Carbonate content				Slope	0.00
	Water erosion	0.99 	 		 	
Casco	Poor		Fair	İ	Poor	
	Too sandy	0.00	Slope	0.32	Too sandy	0.00
	Organic matter	0.12			Slope	0.00
	content			ļ	Rock fragments	0.12
	Droughty	0.66 	 		 	
20G:						į
Hennepin		:	Poor	:	Poor	
	Organic matter	0.12	Slope	0.00	Slope	0.00
	content	0.46	Low strength	0.22	Hard to reclaim	0.00
	Carbonate content Water erosion	0.46	 	I	(dense layer) Carbonate content	10 00
	warer erosion	0.23	I	I	carbonate content	10.33

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source reclamation mater:		Potential as sou of roadfill	rce	Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
820G: Casco	Too sandy Organic matter content	 0.00 0.12 0.25	 Poor Slope 	 0.00 	Too sandy Rock fragments	 0.00 0.00 0.00 0.68
830: Landfills	 Not rated 	 	 Not rated 		 Not rated 	
864: Pits, quarry	 Not rated 	 	 Not rated 		 Not rated 	
865: Pits, gravel	 Not rated 	 	 Not rated 		 Not rated 	
969E2: Casco	Too sandy Organic matter content	 0.00 0.12 0.41	 Fair Slope 	 0.98 	Slope Rock fragments	 0.00 0.00 0.00 0.00
Rodman	 Poor Too sandy Droughty Carbonate content Organic matter content	0.00	 Fair Slope 	 0.98 	Hard to reclaim (rock fragments)	0.00
969F: Casco	Too sandy	 0.00 0.12 0.15	 Poor Slope 	 0.00 	Too sandy Rock fragments	 0.00 0.00 0.00 0.00
Rodman	Poor Too sandy Droughty Carbonate content Organic matter content	 0.00 0.00 0.46 0.50	Poor Slope 	 0.00 	Too sandy Hard to reclaim (rock fragments)	0.00
1103A: Houghton	!	 0.00 	 Poor Wetness 	 0.00 	 Poor Wetness Organic matter content	 0.00 0.00
1480A: Moundprairie	 Good 	 	 Poor Wetness Low strength Shrink-swell	 0.00 0.00 0.99	 Poor Wetness 	 0.00

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as sou of roadfill	rce	Potential as source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3073A: Ross	!	 0.88 0.99	 Poor Low strength 	 0.00 	 Good 	
3076A: Otter	!	 0.68 	 Poor Wetness Low strength	 0.00 0.22	 Poor Wetness	 0.00
3082A: Millington	 Fair Carbonate content 	!	 Poor Wetness Low strength Shrink-swell	 0.00 0.00 0.98	 Poor Wetness 	 0.00
3107A: Sawmill	!	 0.98 0.99	!	0.00	!	 0.00 0.98
3321A: Du Page		 0.12 0.80	 Good 	 	 Fair Carbonate content 	 0.99
3451A: Lawson	!	 0.68	 Poor Low strength Wetness	 0.00 0.14	 Fair Wetness 	 0.14
3480A: Moundprairie	 Good 	 	 Poor Wetness Low strength	 0.00 0.00	 Poor Wetness	 0.00
3800A: Psamments	·	 0.00 0.00 0.12 0.88 0.98	 Good 	 	 Poor Too sandy 	 0.00
7073A: Ross	 Good 	 	 Good 	 	 Good 	
8073A: Ross	 Good 	 	 Fair Low strength 	 0.78	 Good 	
8107A: Sawmill	 Fair Too clayey 	 0.98 	 Poor Wetness Low strength Shrink-swell	 0.00 0.00 0.87	!	 0.00 0.98

Table 19b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as sou of roadfill	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
8151A:							
	Fair	i	 Fair	i	Fair	i	
	Organic matter	0.68	Wetness	0.14	Wetness	0.14	
	Too acid	0.88	 -	į		į	
8404A:	 		 				
Titus	Fair	İ	Poor	İ	Poor	İ	
	Too clayey	0.02	Wetness	0.00	Wetness	0.00	
	Organic matter	0.68	Low strength	0.00	Too clayey	0.01	
	content		Shrink-swell	0.12			
8451A:			 				
Lawson	Good	İ	Poor	İ	Fair	Ì	
			Low strength	0.00	Wetness	0.14	
			Wetness	0.14			
8516A:			 				
Faxon	Fair	İ	Poor	İ	Poor	İ	
	Too acid	0.61	Depth to bedrock	0.00	Wetness	0.00	
	Depth to bedrock	0.93	Wetness	0.00	Depth to bedrock	0.93	
	Organic matter	0.96	Low strength	0.00	Too acid	0.99	

Table 20a.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pond reservoir ar	eas	Embankments, dikes levees	, and	Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23B: Blount	 Somewhat limited Seepage 	 0.02 	Very limited Depth to saturated zone Piping	 1.00 0.02	 Very limited Depth to water 	 1.00
51A: Muscatune	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.18	 Somewhat limited Slow refill Cutbanks cave 	 0.28 0.10
60C2: La Rose	 Somewhat limited Seepage	0.72	 Somewhat limited Piping	0.36	 Very limited Depth to water	1.00
60D2: La Rose	 Somewhat limited Seepage Slope	 0.72 0.02	 Somewhat limited Piping	0.37	 Very limited Depth to water	1.00
61A: Atterberry	 Somewhat limited Seepage	 0.72 	 Very limited Depth to saturated zone Piping	1.00	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
61B: Atterberry	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.01	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
67A: Harpster	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.22	 Somewhat limited Slow refill Cutbanks cave	0.28
68A: Sable	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
86B: Osco	 Somewhat limited Seepage	0.72	 Somewhat limited Piping 	0.03	 Very limited Depth to water 	1.00
86C2: Osco	 Somewhat limited Seepage	0.72	 Somewhat limited Piping 	0.01	 Very limited Depth to water 	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87A, 87B: Dickinson	 Very limited Seepage 	 1.00	 Somewhat limited Seepage 	 0.31	 Very limited Depth to water	 1.00
87C2: Dickinson	 Very limited Seepage	 1.00	 Somewhat limited Seepage	 0.67	 Very limited Depth to water	1.00
88B: Sparta	 Very limited Seepage 	 1.00	 Somewhat limited Seepage	 0.10	 Very limited Depth to water	1.00
88D: Sparta	 Very limited Seepage 	 1.00	 Somewhat limited Seepage 	 0.31	 Very limited Depth to water	1.00
91A, 91B: Swygert	 Not limited 	 	 Very limited Depth to saturated zone Hard to pack	 1.00 0.13	 Very limited Depth to water	 1.00
91B2: Swygert	 Not limited 	 	 Very limited Depth to saturated zone Hard to pack	 1.00 0.21	 Very limited Depth to water	 1.00
91C2: Swygert	 Not limited 	 	 Very limited Depth to saturated zone Hard to pack	 1.00 0.18	 Very limited Depth to water	 1.00
91C3: Swygert	 Not limited 		 Very limited Depth to saturated zone Hard to pack	 1.00 0.23	 Very limited Depth to water	 1.00
103A: Houghton	 Very limited Seepage 	 1.00 	 Very limited Organic matter content Depth to saturated zone	 1.00 1.00 	 Somewhat limited Cutbanks cave 	 0.10
104A: Virgil	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Piping	 1.00 0.02	 Very limited Cutbanks cave 	 1.00
105A: Batavia	 Very limited Seepage 	 1.00	 Somewhat limited Piping	 0.47	 Very limited Depth to water	1.00
105B: Batavia	 Very limited Seepage 	 1.00	 Somewhat limited Piping	 0.42	 Very limited Depth to water	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	, and	Aquifer-fed excavated pond	ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105C2: Batavia	 Very limited Seepage 	1.00	 Somewhat limited Piping	 0.23	 Very limited Depth to water 	 1.00
125A: Selma	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Piping Ponding Pending	 1.00 1.00 1.00 0.01	 Very limited Cutbanks cave 	 1.00
131B: Alvin	 Very limited Seepage	1.00	 Not limited 	 	 Very limited Depth to water 	1.00
131C2: Alvin	 Very limited Seepage 	1.00	 Somewhat limited Seepage	 0.11	 Very limited Depth to water 	1.00
132A: Starks	 Very limited Seepage 	1.00	 Very limited Depth to saturated zone Piping	 1.00 0.90	 Very limited Cutbanks cave 	 1.00
134A: Camden	 Very limited Seepage 	1.00	 Somewhat limited Piping Seepage	 0.93 0.06	 Very limited Depth to water 	 1.00
134B: Camden	 Very limited Seepage 	1.00	 Somewhat limited Piping Seepage	 0.98 0.08	 Very limited Depth to water 	1.00
134C2: Camden	 Very limited Seepage 	1.00	 Very limited Piping Seepage	 0.99 0.08	 Very limited Depth to water 	
134D2: Camden	 Very limited Seepage Slope	1.00	 Very limited Piping Seepage	 1.00 0.08	 Very limited Depth to water 	1.00
134D3: Camden	 Very limited Seepage Slope	1.00	 Somewhat limited Piping Seepage	 0.56 0.09	 Very limited Depth to water 	1.00
134F: Camden	 Very limited Seepage Slope	1.00	 Somewhat limited Piping Seepage	 0.99 0.09	 Very limited Depth to water 	1.00
146A: Elliott	 Not limited - 		 Very limited Depth to saturated zone Piping	 1.00 0.41	 Very limited Depth to water 	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	, and	Aquifer-fed excavated pond	s
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
146B: Elliott	 Not limited 		 Very limited Depth to saturated zone Piping	 1.00 0.57	 Very limited Depth to water 	 1.00
146B2: Elliott	 Not limited 	 	Very limited Depth to saturated zone Piping	 1.00 0.43	 Very limited Depth to water 	 1.00
147B2: Clarence	 Not limited 	 	 Very limited Depth to saturated zone Hard to pack	 1.00 0.58	 Very limited Depth to water 	 1.00
148A, 148B: Proctor	 Very limited Seepage 	 1.00	 Somewhat limited Piping 	 0.58	 Very limited Depth to water 	 1.00
148C2: Proctor	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	0.40	 Very limited Depth to water 	
149A: Brenton	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Piping	 1.00 0.63	 Very limited Cutbanks cave	 1.00
151A: Ridgeville	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Seepage	 1.00 0.12	 Very limited Cutbanks cave 	 1.00
151B: Ridgeville	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Seepage	 1.00 0.10	 Very limited Cutbanks cave 	 1.00
152A: Drummer	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Cutbanks cave 	 1.00
154A: Flanagan	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.42	 Very limited Depth to water 	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	Embankments, dikes, and levees		 Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
171A: Catlin	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.75 0.10	 Very limited Depth to water 	 1.00
171B: Catlin	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.51	 Very limited Depth to water 	 1.00
171B2: Catlin	 Somewhat limited Seepage 	 0.72 	Somewhat limited Depth to saturated zone Piping	 0.75 0.23	 Very limited Depth to water 	 1.00
171C2: Catlin	 Somewhat limited Seepage 	 0.72 		 0.75 0.11	 Very limited Depth to water 	
171C3: Catlin	 Somewhat limited Seepage	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.75 0.14	 Very limited Depth to water	1.00
193C2: Mayville	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.27	 Very limited Depth to water 	
198A: Elburn	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Piping Seepage	 1.00 0.51 0.05	 Very limited Cutbanks cave 	 1.00
199A: Plano	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	 0.48 0.01	 Very limited Depth to water 	1.00
199B: Plano	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	 0.94 0.01	 Very limited Depth to water 	1.00
199C2: Plano	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	 0.32 0.01	 Very limited Depth to water 	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	, and	Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
206A: Thorp	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Ponding Piping Seepage	 1.00 1.00 0.48 0.01	 Very limited Cutbanks cave 	 1.00
210A: Lena	 Very limited Seepage 	 1.00 	Very limited Organic matter content Depth to saturated zone	 1.00 1.00	 Somewhat limited Cutbanks cave 	 0.10
219A: Millbrook	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Piping	1	 Very limited Cutbanks cave 	1.00
223B, 223B2, 223C2: Varna	 Somewhat limited Seepage 	 0.02	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	1.00
223C3: Varna	 Not limited 	 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	1.00
223D2: Varna	 Somewhat limited Seepage 	 0.02 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	1.00
223D3: Varna	 Somewhat limited Seepage 	 0.04 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.01	 Very limited Depth to water 	1.00
228B, 228C2: Nappanee	 Not limited 	 	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	1.00
228C3: Nappanee	 Not limited 	 	 Very limited Depth to saturated zone Hard to pack	 1.00 0.24	 Very limited Depth to water 	1.00
232A: Ashkum	 Somewhat limited Seepage 	 0.04 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Somewhat limited Slow refill Cutbanks cave 	0.96

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	 Rating class and limiting features	Value	Rating class and limiting features		 Rating class and limiting features	Value
233A: Birkbeck	 Somewhat limited Seepage 	 0.72 	saturated zone	 0.86 0.54	 Very limited Depth to water 	 1.00
233B: Birkbeck	 Somewhat limited Seepage 	:	 Somewhat limited Depth to saturated zone Piping	 0.86 0.14	_	 1.00
233C2: Birkbeck	 Somewhat limited Seepage 	:	 Somewhat limited Depth to saturated zone Piping	1	 Very limited Depth to water 	 1.00
234A: Sunbury	 Somewhat limited Seepage 		 Very limited Depth to saturated zone Piping	 1.00 0.59	 Very limited Depth to water 	1.00
235A: Bryce	 Not limited 	 	 Very limited Depth to saturated zone Ponding Hard to pack	 1.00 1.00 0.31	Cutbanks cave	 0.96 0.10
236A: Sabina	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.01	 Very limited Depth to water 	1.00
238A: Rantoul	 Not limited 	 	 Very limited Depth to saturated zone Ponding Hard to pack	 1.00 1.00 0.27	Cutbanks cave	 0.96 0.10
241C3: Chatsworth	 Not limited - 	 	Somewhat limited Depth to saturated zone Hard to pack	 0.98 0.37	 Very limited Depth to water 	 1.00
241D3: Chatsworth	 Not limited 	 	Somewhat limited Depth to saturated zone Hard to pack	 0.98 0.43	 Very limited Depth to water 	 1.00
241E3: Chatsworth	 Somewhat limited Slope 	 0.04 	 Somewhat limited Depth to saturated zone Hard to pack	 0.98 0.40	 Very limited Depth to water 	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		 Embankments, dikes levees 	, and	Aquifer-fed excavated ponds	
	Rating class and	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241F: Chatsworth	 Somewhat limited Slope 	 0.28 	 Somewhat limited Depth to saturated zone Hard to pack	 0.98 0.38	 Very limited Depth to water 	 1.00
241G: Chatsworth	 Somewhat limited Slope 	 0.88 	 Somewhat limited Depth to saturated zone Hard to pack	 0.98 0.33	 Very limited Depth to water 	1.00
242A: Kendall	 Somewhat limited Seepage	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.53	 Somewhat limited Slow refill Cutbanks cave	0.28
243A: St. Charles	 Somewhat limited Seepage	 0.72	 Somewhat limited Piping	 0.64	 Very limited Depth to water	1.00
243B: St. Charles	 Somewhat limited Seepage	 0.72	 Somewhat limited Piping	 0.63	 Very limited Depth to water	1.00
243C2: St. Charles	 Somewhat limited Seepage	0.72	 Somewhat limited Piping	 0.19	 Very limited Depth to water	1.00
244A: Hartsburg	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.39	 Somewhat limited Slow refill Cutbanks cave	0.28
278A, 278B: Stronghurst	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone	 1.00 	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
279B: Rozetta	 Somewhat limited Seepage	0.72	 Somewhat limited Piping	 0.01	 Very limited Depth to water	1.00
280C2: Fayette	 Somewhat limited Seepage	 0.72	 Somewhat limited Piping	 0.03	 Very limited Depth to water	1.00
290A, 290B: Warsaw	 Very limited Seepage	 1.00	 Somewhat limited Seepage 	 0.24	 Very limited Depth to water	1.00
290C2: Warsaw	 Very limited Seepage	 1.00 	 Somewhat limited Seepage 	 0.13	 Very limited Depth to water 	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
293A, 293B: Andres	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.75	 Very limited Depth to water 	 1.00 	
294B: Symerton	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.88 0.53	 Very limited Depth to water 	 1.00	
294C2: Symerton	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.83 0.80	 Very limited Depth to water 	 1.00 	
295A: Mokena	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.08	 Very limited Depth to water 	 1.00 	
295B: Mokena	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to water 	 1.00 	
298B: Beecher	 Somewhat limited Seepage 	 0.02 	 Very limited Depth to saturated zone Piping	 1.00 0.28	 Very limited Depth to water 		
311B: Ritchey	 Very limited Depth to bedrock Seepage 	:	 Very limited Thin layer Piping	 1.00 0.37	 Very limited Depth to water 	 1.00 	
314A: Joliet	 Very limited Depth to bedrock Seepage 	 1.00 0.02 	Very limited Depth to saturated zone Thin layer Ponding Piping	 1.00 1.00 1.00 0.26		 1.00 0.28 0.10	
315B: Channahon	 Very limited Depth to bedrock Seepage		 Very limited Thin layer Piping	 1.00 0.31	 Very limited Depth to water 	 1.00	
317A: Millsdale	 Somewhat limited Depth to bedrock Seepage 	:	 Very limited Depth to saturated zone Ponding Thin layer	 1.00 1.00 0.66	 Very limited Depth to hard bedrock Slow refill Cutbanks cave	 1.00 0.28 0.10	

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	, and	Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
318B, 318C2: Lorenzo	 Very limited Seepage	 1.00	 Somewhat limited Seepage	 0.31	 Very limited Depth to water	 1.00
320B, 320C2: Frankfort	 Not limited 	 	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	1.00
325B, 325C2: Dresden	 Very limited Seepage 	1.00	 Somewhat limited Seepage 	 0.26	 Very limited Depth to water	1.00
327B, 327C2, 327D2: Fox	 Very limited Seepage 	1.00	 Somewhat limited Seepage	 0.31	 Very limited Depth to water 	1.00
330A: Peotone	 Somewhat limited Seepage 	 0.04 	 Very limited Depth to saturated zone Ponding Hard to pack	 1.00 1.00 0.19	 Somewhat limited Slow refill Cutbanks cave 	 0.96 0.10
344A: Harvard	 Very limited Seepage 	1.00	 Somewhat limited Piping	 0.61	 Very limited Depth to water	1.00
344B: Harvard	 Very limited Seepage 	1.00	 Somewhat limited Piping	 0.77	 Very limited Depth to water	1.00
344C2: Harvard	 Very limited Seepage	1.00	 Somewhat limited Piping	 0.87	 Very limited Depth to water	1.00
356A: Elpaso	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.01	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
375A, 375B, 375B2: Rutland	 Somewhat limited Seepage	 0.04	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water	1.00
388B, 388B2, 388C2: Wenona	 Somewhat limited Seepage 	 0.04 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	1.00
397F: Boone	 Very limited Seepage Depth to bedrock Slope	 1.00 0.34 0.28	 Very limited Seepage Thin layer 	 0.99 0.99	 Very limited Depth to water 	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
413B: Gale	 Very limited Seepage Depth to bedrock	1.00	Somewhat limited Piping Thin layer Seepage	 0.92 0.61 0.02	: -	 1.00
413C2: Gale	 Very limited Seepage Depth to bedrock 	 1.00 0.02	 Somewhat limited Piping Thin layer Seepage	 0.91 0.58 0.02	 Very limited Depth to water 	 1.00
435A: Streator	 Somewhat limited Seepage 	 0.04 	 Very limited Depth to saturated zone Ponding Hard to pack	 1.00 1.00 0.42	 Somewhat limited Slow refill Cutbanks cave	0.28
448B, 448C2: Mona	 Somewhat limited Seepage 	 0.04 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water	1.00
512B: Danabrook	 Somewhat limited Seepage	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.60	 Very limited Depth to water	1.00
512C2: Danabrook	 Somewhat limited Seepage	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.75 0.68	 Very limited Depth to water	1.00
516A: Faxon	 Somewhat limited Seepage Depth to bedrock 	0.72	 Very limited Depth to saturated zone Ponding Thin layer Piping	 1.00 1.00 0.66 0.62	 Somewhat limited Slow refill Cutbanks cave 	 0.28 0.10
527C2: Kidami	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.87 0.68 	 Very limited Depth to water 	1.00
527D2: Kidami	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.92 0.68 	 Very limited Depth to water 	1.00
530B: Ozaukee	 Somewhat limited Seepage 	 0.02 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	 1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
530C2: Ozaukee	 Somewhat limited Seepage 	 0.02	 Somewhat limited Depth to saturated zone	 0.98	 Very limited Depth to water	 1.00	
530C3: Ozaukee	 Somewhat limited Seepage 	 0.02 	 Somewhat limited Depth to saturated zone	 0.75 	 Very limited Depth to water 	 1.00	
530D2: Ozaukee	 Somewhat limited Seepage 	 0.02 	 Somewhat limited Depth to saturated zone	 0.98 	 Very limited Depth to water 	 1.00 	
530D3: Ozaukee	 Somewhat limited Seepage 	 0.02 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to water 	 1.00 	
530E2: Ozaukee	 Somewhat limited Slope Seepage	 0.04 0.02		 0.98 	 Very limited Depth to water 	 1.00 	
530F: Ozaukee	 Somewhat limited Slope Seepage	 0.28 0.02		 0.68 	 Very limited Depth to water 	 1.00 	
541B: Graymont	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.26	 Very limited Depth to water 	 1.00 	
541B2: Graymont	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.23	 Very limited Depth to water 	 1.00 	
541C2: Graymont	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.86 0.21	 Very limited Depth to water 	 1.00 	
542A: Rooks	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.05	 Very limited Depth to water 	 1.00 	
542B: Rooks	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.02	 Very limited Depth to water 	 1.00 	

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir ar	eas	Embankments, dikes levees	Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
549B: Marseilles	 Somewhat limited Seepage Depth to bedrock	0.72	· -	 0.46 0.11	 Very limited Depth to water 	 1.00	
549C2: Marseilles	 Somewhat limited Depth to bedrock 	:	 Somewhat limited Thin layer Piping	 0.95 0.02	 Very limited Depth to water 	1.00	
549D2: Marseilles	 Somewhat limited Depth to bedrock Slope	!	 Somewhat limited Thin layer Hard to pack	 0.93 0.01	 Very limited Depth to water 	1.00	
549F: Marseilles	 Somewhat limited Slope Depth to bedrock	0.36	 Somewhat limited Thin layer	 0.70	 Very limited Depth to water	1.00	
549G: Marseilles	 Somewhat limited Slope Depth to bedrock	0.99	 Somewhat limited Thin layer	 0.70	 Very limited Depth to water 	1.00	
554B: Kernan	 Somewhat limited Seepage 	 0.04	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	1.00	
560D2: St. Clair	 Not limited 	 	 Somewhat limited Depth to saturated zone	 0.68	 Very limited Depth to water 	1.00	
560E: St. Clair	 Somewhat limited Slope 	 0.04	 Somewhat limited Depth to saturated zone	 0.98	 Very limited Depth to water 	1.00	
567B: Elkhart	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping 	 0.53	 Very limited Depth to water 	 1.00	
572A: Loran	 Somewhat limited Seepage Depth to bedrock 	0.72	 Very limited Depth to saturated zone Thin layer Piping	 1.00 0.04 0.03	 Very limited Depth to water 	 1.00 	
572B: Loran	 Somewhat limited Seepage Depth to bedrock	0.72	 Very limited Depth to saturated zone Thin layer Piping	 1.00 0.08 0.04	 Very limited Depth to water 	1.00	

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas 		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
572C2: Loran	 Somewhat limited Seepage Depth to bedrock	0.72	Very limited Depth to saturated zone Thin layer Piping	 1.00 0.42 0.02	 Very limited Depth to water 	 1.00
614A: Chenoa	 Somewhat limited Seepage 	 0.04 	 Very limited Depth to saturated zone Piping	 1.00 0.04	 Very limited Depth to water 	1.00
614B: Chenoa	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.13	 Very limited Depth to water 	1.00
662B: Barony	 Very limited Seepage 	 1.00 	Somewhat limited Piping Depth to saturated zone	 0.70 0.68 	Very limited Cutbanks cave Depth to saturated zone	 1.00 0.14
663B: Clare	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.56	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28
667B: Kaneville	 Very limited Seepage 	 1.00 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.60	 Very limited Cutbanks cave Depth to saturated zone	 1.00 0.14
668B: Somonauk	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Depth to saturated zone	 0.88 0.68	 Very limited Cutbanks cave Depth to saturated zone	 1.00 0.14
675B: Greenbush	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping 	 0.17 	 Very limited Depth to water Slow refill	1.00
675C2: Greenbush	 Somewhat limited Seepage 	0.72	 Somewhat limited Piping	0.08	 Very limited Depth to water 	 1.00
679B: Blackberry	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Piping Depth to saturated zone	 0.74 0.68 		 0.28 0.14 0.10

Table 20a.--Water Management--Continued

Map symbol and soil name	 Pond reservoir ar 	eas	 Embankments, dikes levees 	, and	Aquifer-fed excavated pond	ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
680B: Campton	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Depth to saturated zone	 0.85 0.68 	 Very limited Cutbanks cave Depth to saturated zone	 1.00 0.14
712A: Spaulding	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.46	 Somewhat limited Slow refill Cutbanks cave 	 0.28 0.10
715A: Arrowsmith	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.81	 Somewhat limited Cutbanks cave Slow refill 	0.50
732A: Appleriver	 Somewhat limited Seepage Depth to bedrock 	 0.72 0.01 	 Very limited Depth to saturated zone Thin layer Piping	 1.00 0.26 0.03	 Very limited Depth to water 	 1.00
732B: Appleriver	 Somewhat limited Seepage Depth to bedrock	 0.72 0.01 	 Very limited Depth to saturated zone Piping Thin layer	 1.00 0.19 0.01	 Very limited Depth to water 	 1.00
791A: Rush	 Very limited Seepage 	 1.00 	 Very limited Piping Seepage	 1.00 0.28	 Very limited Depth to water 	1.00
791B: Rush	 Very limited Seepage 	 1.00 	 Very limited Piping Seepage	 0.99 0.28	 Very limited Depth to water 	1.00
792A: Bowes	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	 0.75 0.17	 Very limited Depth to water 	1.00
792B: Bowes	 Very limited Seepage 	 1.00 	 Somewhat limited Piping Seepage	 0.86 0.17	 - Very limited Depth to water - 	1.00
794G: Marseilles	 Somewhat limited Slope Depth to bedrock	 0.97 0.04	 Somewhat limited Thin layer 	 0.70 	 Very limited Depth to water 	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas 		 Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
794G: Northfield	 Somewhat limited Slope Depth to bedrock Seepage	0.97	 Very limited Thin layer Piping	 1.00 0.91	 Very limited Depth to water 	 1.00
Ritchey	 Very limited Depth to bedrock Slope Seepage	 1.00 0.97 0.02	 Very limited Thin layer Piping	 1.00 0.40 	 Very limited Depth to water 	1.00
802B, 802D: Orthents, loamy	 Somewhat limited Seepage 	 0.04	 Somewhat limited Piping 	 0.68	 Very limited Depth to water	1.00
804D: Orthents, acid	 Not limited 	 	 Not limited 	 	Very limited Depth to water	1.00
804G: Orthents, acid	 Somewhat limited Slope 	 0.88	 Not limited 	; 	 Very limited Depth to water	1.00
805B: Orthents, clayey	 Not limited - 	 	 Somewhat limited Depth to saturated zone	 0.68 	 Very limited Depth to water 	1.00
814A: Muscatune	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.18	 Somewhat limited Slow refill Cutbanks cave	0.28
Buckhart	 Somewhat limited Seepage 	 0.72 	 Somewhat limited Depth to saturated zone Piping	 0.68 0.06	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	 0.28 0.14 0.10
817A: Channahon		0.54		 1.00 0.06	 Very limited Depth to water	1.00
Hesch	: -	1.00	· -	 0.81 0.06	 Very limited Depth to water 	1.00
817B: Channahon	Depth to bedrock		 Very limited Thin layer	 1.00 	 Very limited Depth to water	1.00
Hesch		1.00	 Somewhat limited Thin layer 	 0.99 	 Very limited Depth to water 	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir ar 	eas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
818A: Flanagan	 Somewhat limited Seepage 	 0.72	 Very limited Depth to saturated zone Piping	 1.00 0.42	Very limited Depth to water	 1.00
Catlin	 Somewhat limited Seepage 	 0.72 	 Somewhat limited		 Very limited Depth to water 	1.00
820E:	 		 	 	 	
Hennepin	 Somewhat limited Slope Seepage	0.15	 Somewhat limited Piping 	 0.31 	 Very limited Depth to water 	1.00
Casco	 Very limited Seepage Slope	 1.00 0.15	 Somewhat limited Seepage 	 0.58 	 Very limited Depth to water 	1.00
820G: Hennepin	 Somewhat limited Slope Seepage	 0.97 0.04	 Somewhat limited Piping	 0.31	 Very limited Depth to water	1.00
Casco	 Very limited Seepage Slope	 1.00 0.97	 Somewhat limited Seepage 	:	 Very limited Depth to water 	 1.00
830: Landfills	 Not rated 		 Not rated 	 	 Not rated 	
864: Pits, quarry	 Not rated 		 Not rated 	 	 Not rated 	
865: Pits, gravel	 Not rated 	 	 Not rated 	 	 Not rated 	
969E2: Casco	 Very limited Seepage Slope	 1.00 0.04	 Somewhat limited Seepage	 0.31 	 Very limited Depth to water 	 1.00
Rodman	 Very limited Seepage Slope 	1.00	 Somewhat limited Seepage 	 0.63 	 Very limited Depth to water 	1.00
969F: Casco	 Very limited Seepage Slope	 1.00 0.28	 Somewhat limited Seepage	 0.31	 Very limited Depth to water	1.00
Rodman	 Very limited Seepage Slope	 1.00 0.28	 Somewhat limited Seepage 	 0.63 	 Very limited Depth to water 	 1.00
1103A: Houghton	 Very limited Seepage 	 1.00 	 Very limited Organic matter content Ponding	 1.00 1.00	 Somewhat limited Cutbanks cave 	0.10

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir ar 	eas	 Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1480A: Moundprairie	 Somewhat limited Seepage 	 0.72 	Very limited Ponding Depth to saturated zone Piping	 1.00 1.00 0.35	!	 1.00 0.28
3073A: Ross	 Very limited Seepage	1.00	 Somewhat limited Piping	0.98	 Very limited Depth to water	1.00
3076A: Otter	 Somewhat limited Seepage 	 0.72 	Very limited Ponding Depth to saturated zone Piping	 1.00 1.00 0.76	Cutbanks cave	 0.28 0.10
3082A: Millington	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.67	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3107A: Sawmill	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.03	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3321A: Du Page	 Somewhat limited Seepage	0.72	 Somewhat limited Piping	 0.97	 Very limited Depth to water	1.00
3451A: Lawson	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.87	 Somewhat limited Slow refill Cutbanks cave	0.28
3480A: Moundprairie	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.16	Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
3800A: Psamments	 Very limited Seepage	1.00	 Somewhat limited Seepage 	 0.97	 Very limited Depth to water	1.00
7073A: Ross	 Very limited Seepage 	 1.00 	 Very limited Piping Seepage	 1.00 0.05	 Very limited Depth to water	1.00
8073A: Ross	 Very limited Seepage	1.00	 Very limited Piping 	 1.00	 Very limited Depth to water	1.00

Table 20a.--Water Management--Continued

Map symbol and soil name	Pond reservoir ar	eas	Embankments, dikes	Embankments, dikes, and levees		ls
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8107A: Sawmill	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Ponding Piping	 1.00 1.00 0.03	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
8151A: Ridgeville	 Very limited Seepage 	 1.00 	 Very limited Depth to saturated zone Seepage	 1.00 0.12	 Very limited Cutbanks cave 	 1.00
8404A: Titus	 Somewhat limited Seepage 	 0.04 	Very limited Depth to saturated zone Ponding	1.00	 Somewhat limited Slow refill Cutbanks cave	 0.96 0.10
8451A: Lawson	 Somewhat limited Seepage 	 0.72 	 Very limited Depth to saturated zone Piping	 1.00 0.91	 Somewhat limited Slow refill Cutbanks cave	 0.28 0.10
8516A: Faxon	 Somewhat limited Seepage Depth to bedrock 	 0.72 0.03 	 Very limited Depth to saturated zone Ponding Thin layer Piping	 1.00 1.00 0.66 0.62	 Somewhat limited Slow refill Cutbanks cave 	0.28

Table 20b. -- Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. Dashes in the drainage column indicate that drainage is generally not needed. See text for further explanation of ratings in this table)

Map symbol and soil name	Constructing gras	sed	Constructing terraces and diversions		Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
23B: Blount	Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Depth to saturated zone Restricted permeability		 Very limited Frost action Restricted permeability	 1.00 0.91
51A: Muscatune	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action 	1.00
60C2: La Rose	 Somewhat limited Restricted permeability	 0.22 	 Somewhat limited Restricted permeability	 0.22 	 	
60D2: La Rose	 Very limited Slope Restricted permeability	 1.00 0.22		 1.00 0.22	 	
61A, 61B: Atterberry	 Very limited Water erosion Depth to saturated zone	 1.00 1.00	!	 1.00 1.00	 Very limited Frost action 	 1.00
67A: Harpster	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Frost action	 1.00 1.00
68A: Sable	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Frost action	 1.00 1.00
86B: Osco	 Not limited 	: 	 Not limited 	 	 	
86C2: Osco	 Very limited Water erosion 	 1.00	 Very limited Water erosion 	 1.00	 	
87A: Dickinson	 Not limited 	 	 Very limited Too sandy	 1.00		

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras waterways	sed	Constructing terr		Drainage 	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>
87B: Dickinson	 Not limited 	 	 Very limited Too sandy 	 1.00	 	
87C2: Dickinson	 Not limited 		 Very limited Too sandy 	 1.00	 	
88B: Sparta	 Very limited Droughty	1.00	 Very limited Too sandy	 1.00	 	
88D:	İ	İ	İ	į	j	İ
Sparta	Very limited Slope Droughty 	 1.00 1.00	-	 1.00 1.00	 	
91A, 91B, 91B2: Swygert	Very limited Depth to saturated zone Restricted permeability	:	Very limited Depth to saturated zone Restricted permeability	1	 Very limited Restricted permeability	 0.91
91C2, 91C3: Swygert	 Very limited Depth to saturated zone Restricted permeability	:	 Very limited Depth to saturated zone Restricted permeability	1	 Very limited Restricted permeability Slope	 1.00 0.16
103A: Houghton	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Ponding	1	 Very limited Ponding Frost action Subsidence	 1.00 1.00 1.00
104A: Virgil	 Very limited Water erosion Depth to saturated zone	 1.00 1.00 	 Very limited Water erosion Depth to saturated zone	 1.00 1.00 	•	 1.00
105A: Batavia			 Very limited Water erosion	 1.00	 	
105B: Batavia	 Very limited Water erosion 	1.00	 - Very limited Water erosion 	1.00	 	
105C2: Batavia	 Very limited Water erosion 	1.00	 Very limited Water erosion 	1.00	 	
125A: Selma	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Frost action 	 1.00 1.00

Table 20b.--Water Management--Continued

Map symbol and soil name	 Constructing gras waterways 	sed	Constructing terr	aces	 Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131B: Alvin	 Not limited 	 	 Very limited Too sandy	 1.00	 	
131C2: Alvin	 Not limited	 	 Not limited	 	 	
132A: Starks	: -	 1.00 1.00 	Depth to saturated zone	 1.00 1.00 1.00	 Very limited Frost action Cutbanks cave	 1.00 1.00
134A, 134B: Camden		 1.00	 Very limited Water erosion	 1.00	 	
134C2: Camden		 1.00	!	 1.00 1.00	 	
134D2, 134D3, 134F: Camden	Slope	 1.00 1.00	 Very limited Water erosion Slope	 1.00 1.00		
146A, 146B, 146B2: Elliott	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Restricted permeability 	 0.91
147B2: Clarence	 Very limited Droughty Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	saturated zone	 1.00 1.00	 Very limited Restricted permeability 	 1.00
148A: Proctor	 Not limited	 	 Not limited	 	 	
148B: Proctor	 Not limited 	 	 Not limited 	 	 	
148C2: Proctor		 1.00	 Very limited Water erosion	 1.00	 	
149A: Brenton		 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action 	 1.00

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras waterways	sed	Constructing terr		 Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	:	Rating class and limiting features	Value
151A, 151B: Ridgeville	· -	:	 Very limited Depth to saturated zone	 1.00	 Not limited 	
152A: Drummer	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Ponding	1	 Very limited Ponding Frost action 	 1.00 1.00
154A: Flanagan	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	saturated zone	1.00	 Very limited Frost action Restricted permeability	 1.00 0.22
171A: Catlin	 Somewhat limited Depth to saturated zone	1	 Very limited Depth to saturated zone		 Very limited Frost action 	1.00
171B: Catlin	· -	 1.00 0.24 	!	 1.00 1.00 	 Very limited Frost action 	
171B2: Catlin	· -	 1.00 0.32	!	 1.00 1.00	 Very limited Frost action 	1.00
171C2, 171C3: Catlin	 Very limited Water erosion Depth to saturated zone	 1.00 0.32	!	 1.00 1.00		 1.00 0.74
193C2: Mayville	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 0.24 0.22	Depth to saturated zone	 1.00 1.00 0.22	Slope Restricted	 1.00 0.74 0.22
198A: Elburn	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Frost action 	 1.00
199A, 199B: Plano	 Not limited	 	 Not limited 	 	 	
199C2: Plano	 Very limited Water erosion	1.00	 Very limited Water erosion	1.00	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways		Constructing terr		Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
206A: Thorp	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91 	 Very limited Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 0.91	Frost action	 1.00 1.00 0.91
210A: Lena	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
219A: Millbrook	 Very limited Water erosion Depth to saturated zone	 1.00 1.00 	 Very limited Water erosion Depth to saturated zone	 1.00 1.00	 Very limited Frost action 	 1.00
223B, 223B2: Varna	 Somewhat limited Restricted permeability Depth to saturated zone	 0.91 0.24	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Restricted permeability 	 0.91
223C2: Varna	Somewhat limited Restricted permeability Depth to saturated zone	 0.91 0.24	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	permeability	 0.91 0.16
223C3: Varna	 Very limited Water erosion Restricted permeability Depth to saturated zone	 1.00 0.91 0.24	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	 Very limited Restricted permeability Slope 	 0.91 0.16
223D2: Varna	 Very limited Slope Restricted permeability Depth to saturated zone	 1.00 0.91 0.24	 Very limited Slope Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	: -	 0.96 0.91
223D3: Varna	Very limited Water erosion Slope Restricted permeability Depth to saturated zone Content of large stones	1.00 1.00 0.91 0.24	Slope Depth to saturated zone Restricted permeability	1.00 1.00 1.00 0.91	Restricted	 0.96 0.91

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways		Constructing terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
228B:	i I		i I		 	İ
Nappanee	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	Very limited Frost action Restricted permeability	 1.00 1.00
228C2, 228C3:	 				 	İ
	Very limited Depth to saturated zone Droughty Restricted permeability	 1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	Very limited Frost action Restricted permeability Slope	 1.00 1.00 0.16
232A:		İ				İ
Ashkum	Very limited	 1.00 0.22 	Very limited	 1.00 1.00 0.22	Very limited Ponding Frost action Restricted permeability	 1.00 1.00 0.22
233A:	į	į			į	į
Birkbeck	Very limited Water erosion Depth to saturated zone	 1.00 0.47 	Very limited Water erosion Depth to saturated zone	 1.00 1.00	Very limited Frost action 	1.00
233B:	 		 		 	
Birkbeck	Very limited Water erosion Depth to saturated zone	 1.00 0.47 	Very limited Water erosion Depth to saturated zone	 1.00 1.00 	Very limited Frost action Slope 	 1.00 0.01
233C2:		į		į		į
Birkbeck	Very limited Water erosion Depth to saturated zone	 1.00 0.47 	Very limited Water erosion Depth to saturated zone	 1.00 1.00 	Very limited Frost action Slope 	 1.00 0.74
234A:	İ	İ		İ	İ	İ
Sunbury	Very limited	 1.00 1.00 0.22	Very limited	 1.00 1.00 0.22	•	 0.22
235A:		į		į	į	į
Bryce	Very limited Depth to saturated zone Restricted permeability	 1.00 0.91 	Very limited Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 0.91	Very limited Ponding Frost action Restricted permeability	 1.00 1.00 0.91

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways		Constructing terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
236A: Sabina	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 1.00 0.22	1	 1.00 1.00 0.22		 1.00 0.22
238A: Rantoul	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	saturated zone	1.00	Frost action	 1.00 1.00 1.00
241C3: Chatsworth	 Very limited Droughty Restricted permeability Depth to saturated zone	 1.00 1.00 0.76	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	permeability	 1.00 0.16
241D3: Chatsworth	Very limited Droughty Slope Restricted permeability Depth to saturated zone	 1.00 1.00 1.00 0.76	 Very limited Slope Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	 Very limited Restricted permeability Slope 	 1.00 0.96
241E3, 241F, 241G: Chatsworth	 Very limited Slope Droughty Restricted permeability Depth to saturated zone	 1.00 1.00 1.00 0.76	 Very limited Slope Depth to saturated zone Restricted permeability	 1.00 1.00 1.00		 1.00 1.00
242A: Kendall			•		 Very limited Frost action 	1.00
243A, 243B: St. Charles	 Very limited Water erosion 		 Very limited Water erosion 	 1.00	 	
243C2: St. Charles	 Very limited Water erosion	 1.00	 Very limited Water erosion 	 1.00	 	
244A: Hartsburg	 Very limited Depth to saturated zone 	1	 Very limited Depth to saturated zone Ponding	1	 Very limited Ponding Frost action	 1.00 1.00

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras	sed	Constructing terr		 Drainage 	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features	<u> </u>	limiting features	
270% 2700.			 			
278A, 278B: Stronghurst	 Very limited		 Very limited	l I	 Very limited	
berongharbe	Water erosion	1.00	Water erosion	1.00	Frost action	1.00
	Depth to	1.00	Depth to	1.00	j	į
	saturated zone	[saturated zone		[1
279B:			l	l I	 	
Rozetta	 Verv limited		 Very limited	İ		i
	Water erosion	1.00		1.00	İ	i
280C2: Fayette	 Very limited		 Very limited	1	 	
rayecce	Water erosion	1.00	! -	1.00	 	İ
						i
290A, 290B:	[İ			!	ļ
Warsaw	Not limited		Very limited			
			Too sandy	1.00	 	
290C2:		İ		İ		i
Warsaw	Not limited	İ	Very limited	į	i	İ
			Too sandy	1.00		ļ
293A, 293B:	 		 		 	
Andres	 Verv limited		 Very limited	i i	 Somewhat limited	i
	Depth to	1.00	! -	1.00	Restricted	0.22
	saturated zone		saturated zone		permeability	
	Restricted	0.22	Restricted	0.22		
	permeability		permeability	 	 	
294B:		İ				i
Symerton	Somewhat limited		Very limited		Very limited	
	Restricted	0.91	· -	1.00		0.91
	permeability Depth to	0.14	saturated zone	0.91	permeability Slope	0.01
	saturated zone		permeability	0.91	Slope	0.01
	İ	į	· -	į	j	i
294C2:				ļ		ļ
Symerton	Somewhat limited Depth to	0.38	Very limited Depth to	1.00	Very limited Slope	0.74
	saturated zone		saturated zone	1	Restricted	0.74
	Restricted	0.22	Restricted	0.22	permeability	İ
	permeability	İ	permeability		!	ļ
295A, 295B:	 		 -	l I	 	
Mokena	 Verv limited		 Very limited	i i	 Very limited	i
	Depth to	1.00		1.00	Restricted	0.91
	saturated zone		saturated zone		permeability	
	Restricted	0.91	Restricted	0.91		
	permeability	 	permeability	 	 	1
298B:					į	
Beecher	· -		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Frost action	1.00
	saturated zone Restricted	0.91	saturated zone	0.91	Restricted	0.91
	permeability		permeability		permeability	1
		i		i	i i	i

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways		Constructing terraces and diversions		 Drainage 	
	 Rating class and limiting features	Value	 Rating class and limiting features	Value	 Rating class and limiting features	Value
311B: Ritchey	 Very limited Depth to hard bedrock Droughty	 1.00 1.00	Very limited Depth to hard bedrock	 1.00 	 	
314A: Joliet	 Very limited Depth to hard bedrock Depth to saturated zone Droughty	 1.00 1.00 	bedrock Depth to saturated zone	 1.00 1.00 	Frost action	 1.00 1.00 0.54
315B: Channahon	 Very limited Depth to hard bedrock Droughty	 1.00 1.00	 Very limited Depth to hard bedrock	 1.00 	 	
317A: Millsdale		 1.00 1.00 0.22	saturated zone Ponding Restricted	 1.00 1.00 0.22 0.06	Frost action Restricted permeability Depth to bedrock	 1.00 1.00 0.22 0.02
318B: Lorenzo	 Very limited Droughty Content of large stones	1.00	· -	 1.00 0.23	 	
318C2: Lorenzo	 Very limited Droughty Content of large stones	1.00	· -	 1.00 0.30	 	
320B: Frankfort	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	saturated zone	 1.00 1.00	 Very limited Frost action Restricted permeability	 1.00 1.00
320C2: Frankfort	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	Restricted	 1.00 1.00 0.16
325B: Dresden	 Somewhat limited Content of large stones 	1	 Very limited Too sandy Content of large stones	 1.00 0.03 	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras	sed	Constructing terr		Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
325C2: Dresden	 Somewhat limited Content of large stones	1	 Very limited Too sandy Content of large stones	 1.00 0.01	 	
327B: Fox	 Not limited 	 	 Very limited Too sandy 	 1.00	 	
327C2: Fox	 Not limited 	 	 Very limited Too sandy	1.00	 	
327D2: Fox	 Very limited Slope 	 1.00	 Very limited Too sandy Slope	 1.00 1.00	 	
330A: Peotone	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22 	saturated zone		1	 1.00 1.00 1.00
344A, 344B: Harvard	 Very limited Water erosion	 1.00	 Very limited Water erosion	1.00	 	
344C2: Harvard	 Very limited Water erosion	1.00	 Very limited Water erosion	1.00	 	
356A: Elpaso	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Frost action	 1.00 1.00
375A, 375B: Rutland	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	 Somewhat limited Restricted permeability	 0.22
375B2: Rutland	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.40	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.40	 Somewhat limited Restricted permeability Slope	 0.40 0.01
388B: Wenona	 Somewhat limited Restricted permeability Depth to saturated zone	 0.40 0.24	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.40	 Somewhat limited Restricted permeability Slope	0.40

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras waterways	sed	Constructing terr		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
388B2: Wenona	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 0.24 0.22	Depth to saturated zone	 1.00 1.00 0.22	!	 0.22 0.01
388C2: Wenona	 Somewhat limited Depth to saturated zone Restricted permeability	 0.24 0.22	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	 Very limited Slope Restricted permeability	 0.74 0.22
397F: Boone	 Very limited Slope Droughty Depth to soft bedrock	 1.00 1.00 0.95	Too sandy	 1.00 1.00 0.95	 	
413B: Gale	 Very limited Water erosion Depth to soft bedrock	 1.00 0.03 	!	 1.00 0.03 	 	
413C2: Gale	 Very limited Water erosion Depth to soft bedrock	 1.00 0.01 	!	 1.00 0.01	 	
435A: Streator	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22 	saturated zone	 1.00 1.00 0.22	Frost action Restricted	 1.00 1.00 1.00
448B: Mona	Somewhat limited Restricted permeability Depth to saturated zone	 0.91 0.24	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Restricted permeability Slope	 0.91 0.01
448C2: Mona	 Somewhat limited Restricted permeability Depth to saturated zone	 1.00 0.24	saturated zone	 1.00 1.00	permeability	 1.00 0.74
512B: Danabrook	 Somewhat limited Depth to saturated zone	 0.24 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action Slope	 1.00 0.01

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways		Constructing terr		Drainage	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u>i</u>
F1000 :						
512C2: Danabrook	 Very limited		 Very limited		 Very limited	
Danabiook	Water erosion	1.00	Water erosion	1.00	Frost action	1.00
	Depth to	0.24	•	1.00	!	0.74
	saturated zone	i	saturated zone	i	<u> </u>	i
	!	ļ	!	ļ	!	1
516A:						
Faxon	Depth to	1.00	Very limited Depth to	1.00	Very limited Ponding	1.00
	saturated zone	1	saturated zone	1	Frost action	1.00
	Depth to soft	0.06	Ponding	1.00	Depth to bedrock	
	bedrock		Depth to soft	0.06		
	İ	į	bedrock	į	İ	i
	!	ļ	!	ļ	!	1
527C2:						
Kidami		!	Very limited	1.00	Somewhat limited	
	Depth to saturated zone	0.24	Depth to saturated zone	1.00	Slope	0.16
	Sacuraced Zone		Sacuraced Zone		 	
527D2:		İ		İ		i
Kidami	Very limited	į	Very limited	į	Very limited	į
	Slope	1.00	Slope	1.00	Slope	0.96
	Depth to	0.24	Depth to	1.00	Restricted	0.22
	saturated zone		saturated zone		permeability	
	Restricted	0.22	Restricted	0.22		
	permeability		permeability		 -	
530B:	 		 		 	
Ozaukee	Somewhat limited		 Very limited		 Very limited	i
	Restricted	0.91	: -	1.00	: -	0.91
	permeability	į	saturated zone	į	permeability	j
	Depth to	0.24	Restricted	0.91		
	saturated zone		permeability			ļ
530C2:			 		 	
Ozaukee	 Somewhat limited		 Very limited		 Very limited	
ondance	Restricted	0.91		1.00		0.91
	permeability		saturated zone		permeability	
	Depth to	0.76	Restricted	0.91	Slope	0.16
	saturated zone	[permeability	[[1
530C3:						
Ozaukee	Water erosion	1.00	Very limited Water erosion	1.00	Very limited Restricted	0.91
	Restricted	0.91	Depth to	1.00	permeability	10.91
	permeability		saturated zone		Slope	0.16
	Depth to	0.32	Restricted	0.91		
	saturated zone	İ	permeability	İ	İ	į
		[[
530D2:						1
Ozaukee	_	1 00	Very limited	1	Very limited	0.96
	Slope Restricted	1.00 0.91	Slope Depth to	1.00	Slope Restricted	0.96
	permeability		saturated zone	1	Restricted permeability	0.91
	Depth to	0.76	Restricted	0.91		i
	saturated zone		permeability		İ	i

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras	sed	Constructing terr		Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
530D3: Ozaukee		 1.00 1.00 0.91 0.86		 1.00 1.00 1.00 0.91	Restricted	 0.96 0.91
530E2: Ozaukee	 Very limited Slope Restricted permeability Depth to saturated zone	 1.00 0.91 0.76	 Very limited Slope Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	 Very limited Slope Restricted permeability	 1.00 0.91
530F: Ozaukee	 Very limited Slope Restricted permeability Depth to saturated zone	 1.00 0.91 0.24	 Very limited Slope Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	 Very limited Slope Restricted permeability	 1.00 0.91
541B: Graymont		 0.91 0.24	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	 Very limited Frost action Restricted permeability Slope	1.00
541B2: Graymont	 Very limited Water erosion Restricted permeability Depth to saturated zone	 1.00 0.91 0.24	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	 Very limited Frost action Restricted permeability Slope	 1.00 0.91 0.04
541C2: Graymont	 Very limited Water erosion Restricted permeability Depth to saturated zone	 1.00 0.91 0.47	 Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 1.00 0.91	•	 1.00 0.91 0.74
542A, 542B: Rooks	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22 	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22 	 Very limited Frost action Restricted permeability	 1.00 0.22
549B: Marseilles	 Very limited Water erosion Restricted permeability	 1.00 0.91 	 Very limited Water erosion Restricted permeability	 1.00 0.91 	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed		 Constructing terr and diversions 		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
549C2:			l			
Marseilles	 Verv limited		 Very limited		 	
	Water erosion	1.00	Water erosion	1.00		i
	Restricted	0.91	Restricted	0.91		i
	permeability	į	permeability	į	İ	j
	Depth to soft	0.79	Depth to soft	0.79	 -	İ
	Dedicer		Dedrock		 	
549D2:						
Marseilles	Very limited	:	Very limited			
	Slope	1.00	Slope	1.00		
	Restricted	0.91	Restricted	0.91	l I	
	permeability Depth to soft	0.71	permeability Depth to soft	0.71	 	1
	bedrock		bedrock		 	
549F:	 		 		 	
Marseilles	 Very limited		 Very limited			i
	Slope	1.00	Slope	1.00	<u> </u>	i
	Restricted	0.91	Restricted	0.91	İ	j
	permeability	İ	permeability	İ		ĺ
	Depth to soft bedrock	0.10	Depth to soft	0.10	 	
549G:				[
Marseilles	Very limited	1	Very limited			
	Slope	1.00	Water erosion	1.00	 	
	Water erosion Restricted	1.00 0.91	Slope Restricted	1.00	 	l i
	permeability	0.91	permeability	0.91	 	
	Depth to soft	0.10	Depth to soft	0.10	 	
	bedrock		bedrock			į
554B:	 				 	
Kernan	Very limited	į	Very limited	į	Very limited	j
	Depth to	1.00	Depth to	1.00	Frost action	1.00
	saturated zone		saturated zone		Restricted	0.40
	Restricted	0.40	Restricted	0.40	permeability	ļ
	permeability		permeability		 	
560D2:		į		į		į
St. Clair	: :	1 00	Very limited	1 00	Very limited	1 00
	Slope Restricted	1.00 1.00	Slope Depth to	1.00 1.00	Restricted permeability	1.00
	permeability	1.00	saturated zone	1	Slope	0.96
	Depth to	0.24	Restricted	1.00		
	saturated zone		permeability			į
560E:	 		 		[
St. Clair	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Droughty	1.00	Depth to	1.00	Restricted	1.00
	Restricted	1.00	saturated zone		permeability	1
	permeability		Restricted	1.00		
	Depth to saturated zone	0.76	permeability		 	
		į		į		į
567B: Elkhart	 		 Not limited		 	
				1		

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing grassed		Constructing terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
572A, 572B: Loran	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Frost action	1.00
572C2: Loran		 1.00 1.00	 Very limited Water erosion Depth to saturated zone	 1.00 1.00	 Very limited Frost action Slope	 1.00 0.74
614A: Chenoa	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.91	saturated zone	 1.00 0.91	 Very limited Restricted permeability	 0.91
614B: Chenoa	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	 Very limited Depth to saturated zone Restricted permeability	 1.00 0.22	 Somewhat limited Restricted permeability Slope	 0.22 0.01
662B: Barony	: -	 1.00 0.24	 Very limited Water erosion Depth to saturated zone	 1.00 1.00	 Very limited Frost action Slope	 1.00 0.01
663B: Clare	 Somewhat limited Depth to saturated zone	 0.24 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action Slope	1.00
667B: Kaneville	 Very limited Water erosion Depth to saturated zone	 1.00 0.24 	l .	 1.00 1.00 	!	 1.00 0.01
668B: Somonauk	: -	 1.00 0.24	'	 1.00 1.00	'	1.00
675B: Greenbush	 Very limited Water erosion	1.00	 Very limited Water erosion	 1.00	 	
675C2: Greenbush	 Very limited Water erosion	1.00	 Very limited Water erosion	 1.00	 	
679B: Blackberry	 Somewhat limited Depth to saturated zone	 0.24 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action Slope	 1.00 0.01

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras	sed	Constructing terr and diversions		Drainage 	
	Rating class and limiting features		Rating class and limiting features	1	Rating class and limiting features	Value
680B:					 	
Campton	Very limited Water erosion Depth to saturated zone	 1.00 0.24	!	 1.00 1.00 		 1.00 0.01
712A:					 	
Spaulding	Very limited Depth to saturated zone 		Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00
715A:					 	
Arrowsmith	Depth to saturated zone	1.00	Very limited Depth to saturated zone 		Very limited Frost action 	1.00
732A, 732B:				į		į
Appleriver	Very limited	 1.00 1.00 0.94	Depth to saturated zone	 1.00 1.00 0.94	Restricted permeability	 1.00 0.94
E013 E015						İ
791A, 791B: Rush	 Very limited Water erosion	1.00	 Very limited Water erosion	1.00	 	
792A, 792B:	[
Bowes	Very limited Water erosion	1.00	 Very limited Water erosion	1.00	 	İ
794G:			 		 	
Marseilles	-	1	Very limited			
	Slope Water erosion	1.00	1	1.00	 	
	Restricted	0.91		0.91		
	permeability		permeability			ļ
	Depth to soft bedrock	0.10	Depth to soft bedrock	0.10	 	
Northfield	 Very limited		 Very limited		 	
NOICHILEIG	Depth to soft	1.00	Slope	1.00		
	bedrock	į	Depth to soft	1.00	į	į
	Slope Droughty	1.00 1.00	bedrock		 	
Ritchey	 		 Very limited			
Ricchey	Slope	1.00	Slope	1.00	 	
	Depth to hard	1.00	Depth to hard	1.00	İ	į
	bedrock Droughty	1.00	bedrock 		 	
802B:	 		 		 	
Orthents, loamy	 Very limited		 Very limited			
	Water erosion	1.00	Water erosion	1.00	!	
	Restricted	0.22	Restricted	0.22		
	permeability	I	permeability	I	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	 Constructing gras waterways 	sed	 Constructing terr and diversions		 Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802D: Orthents, loamy	 Very limited Water erosion Slope Restricted permeability	 1.00 1.00 0.22	 Very limited Water erosion Slope Restricted permeability	 1.00 1.00 0.22	 	
804D: Orthents, acid	 Very limited Slope Restricted permeability	 1.00 0.94	 Very limited Slope Restricted permeability	 1.00 0.94	 	
804G: Orthents, acid	 Very limited Slope Restricted permeability	 1.00 0.94	 Very limited Slope Restricted permeability	 1.00 0.94	 	
805B: Orthents, clayey	Very limited Water erosion Droughty Restricted permeability Depth to saturated zone	 1.00 1.00 1.00 0.24	Very limited Water erosion Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	 Very limited Restricted permeability 	1.00
814A: Muscatune	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	 Very limited Frost action	1.00
Buckhart	 Somewhat limited Depth to saturated zone	 0.24 	 Very limited Depth to saturated zone	 1.00 	 Very limited Frost action	 1.00
817A: Channahon	 Very limited Depth to soft bedrock Droughty	 1.00 1.00	 Very limited Depth to soft bedrock	 1.00 	 	
Hesch	 Somewhat limited Depth to soft bedrock	 0.29 	 Somewhat limited Depth to soft bedrock	 0.29 	 	
817B: Channahon	 Very limited Depth to soft bedrock Droughty	 1.00 1.00	 Very limited Depth to soft bedrock	 1.00 	 	
Hesch	 Very limited Droughty Depth to soft bedrock	 1.00 0.95 	 Somewhat limited Depth to soft bedrock	 0.95 	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras waterways	sed	Constructing terr		 Drainage 	
	Rating class and	Value	Rating class and limiting features		Rating class and limiting features	Value
0103						İ
818A: Flanagan	-	 1.00 	 Very limited Depth to saturated zone	:	 Very limited Frost action 	 1.00
Catlin	 Somewhat limited Depth to saturated zone		 Very limited Depth to saturated zone	1	 Very limited Frost action 	 1.00
820E:						İ
Hennepin	 Very limited Slope Restricted permeability	1.00	 Slope Restricted permeability	 1.00 0.22 	 	
Casco	 Very limited Slope Content of large stones	1.00		 1.00 1.00 0.01	 	
820G:	 					
Hennepin	Very limited Slope Restricted permeability	 1.00 0.22 	_	 1.00 0.22 	 	
Casco	 Very limited Slope Droughty Content of large stones	1.00	Too sandy	 1.00 1.00 0.01	 	
830: Landfills	 Not rated 	 	 Not rated 	 	 Not rated 	
864: Pits, quarry	 Not rated 	 	 Not rated 	 	 Not rated 	
865: Pits, gravel	 Not rated 	 	 Not rated 	 	 Not rated 	
969E2: Casco	 Very limited Slope Droughty Content of large stones	1.00	 Very limited Slope Too sandy Content of large stones	 1.00 1.00 0.09	 	
Rodman	 Very limited Slope Droughty	 1.00 1.00	Very limited Slope Too sandy	 1.00 1.00	 	
969F: Casco	 Very limited Slope Droughty Content of large stones	1.00	 Very limited Slope Too sandy Content of large stones	 1.00 1.00 0.20	- 	

Table 20b.--Water Management--Continued

Map symbol and soil name	 Constructing gras waterways 	sed	 Constructing terr and diversions 		 Drainage 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
969F: Rodman	 Very limited Slope Droughty	 1.00 1.00	 Very limited Slope Too sandy	 1.00 1.00	 	
1103A: Houghton	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
1480A: Moundprairie	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Ponding Frost action Flooding	 1.00 1.00 1.00
3073A:		İ		į		
Ross	Not limited 	 	Not limited 	 	 	
3076A: Otter	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
3082A: Millington	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
3107A: Sawmill	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
3321A: Du Page	 Not limited 	 	 Not limited 		 	
3451A: Lawson	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Frost action Flooding	1.00
3480A: Moundprairie	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Frost action	 1.00 1.00 1.00
3800A: Psamments	 Very limited Droughty	 1.00	 Very limited Too sandy	1.00	 	
7073A: Ross	 Not limited 	 	 Not limited 	 	 	

Table 20b.--Water Management--Continued

Map symbol and soil name	Constructing gras waterways 	sed		Constructing terraces and diversions		Drainage 	
	Rating class and	Value		Value	Rating class and	Valu	
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u> </u>	
8073A:					 		
Ross	Not limited		Not limited				
8107A:					 		
Sawmill	 Very limited		 Very limited	i	 Very limited	i	
	Depth to	1.00	Depth to	1.00	Ponding	1.00	
	saturated zone	i i	saturated zone	i	Frost action	1.00	
		į	Ponding	1.00	Flooding	1.00	
8151A:							
Ridgeville	Very limited	į į	Very limited	i	Very limited	i	
	Depth to	1.00	Depth to	1.00	Flooding	1.00	
	saturated zone	į	saturated zone	į		į	
8404A:							
Titus	Very limited		Very limited		Very limited		
	Depth to	1.00	Depth to	1.00	Ponding	1.00	
	saturated zone		saturated zone		Frost action	1.00	
	Restricted	0.91	Ponding	1.00	Flooding	1.00	
	permeability		Restricted	0.91	Restricted	0.91	
			permeability		permeability		
8451A:							
Lawson	Very limited		Very limited		Very limited		
	Depth to	1.00	Depth to	1.00	Frost action	1.00	
	saturated zone		saturated zone		Flooding	1.00	
8516A:							
Faxon	Very limited		Very limited		Very limited		
	Depth to	1.00	Depth to	1.00	Ponding	1.00	
	saturated zone		saturated zone		Frost action	1.00	
	Depth to soft	0.06	Ponding	1.00	Flooding	1.00	
	bedrock		Depth to soft	0.06			
			bedrock				

Table 20c. -- Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Irrigation (al application meth		Sprinkler irrigation		Drip or trickle	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23B: Blount	 Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.01	Very limited Depth to saturated zone Water erosion	 1.00 1.00	 Very limited Depth to saturated zone	 1.00
51A: Muscatune	 Very limited Depth to saturated zone Too acid	 1.00 0.04	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	1.00
60C2: La Rose	 Somewhat limited Slope Restricted permeability	 0.98 0.31 	 Somewhat limited Droughty Slope 	 0.08 0.06 	 Not limited - 	
60D2: La Rose	 Very limited Slope Restricted permeability	 1.00 0.31 	 Somewhat limited Slope Droughty 	 0.98 0.11 	 Not limited 	
61A: Atterberry	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
61B: Atterberry	 Very limited Depth to saturated zone Slope	 1.00 0.02	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone	
67A: Harpster	 Very limited Ponding Depth to saturated zone	 1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00
68A: Sable	 Very limited Ponding Depth to saturated zone	 1.00 1.00 		 1.00 1.00		 1.00 1.00
86B: Osco	 Somewhat limited Slope	0.02	 Not limited 		 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		Sprinkler irrigation		Drip or trickle	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86C2: Osco	 Somewhat limited Slope 	 0.98	 Very limited Water erosion Slope	 1.00 0.06	 Not limited 	
87A: Dickinson	 Somewhat limited Droughty 	0.04	 Somewhat limited Droughty 	 0.54	 Not limited 	
87B: Dickinson	 Somewhat limited Slope	0.02	 Somewhat limited Droughty	 0.26	 Not limited 	
87C2: Dickinson	 Somewhat limited Slope Droughty	0.98	 Somewhat limited Droughty Slope	 0.67 0.06	 Not limited 	
88B: Sparta	 Somewhat limited Too acid Slope 	 0.08 0.02 		 1.00 1.00 1.00	 Not limited 	
88D: Sparta	 Very limited Slope Too acid Droughty	 1.00 0.08 0.01	Wind erosion	 1.00 1.00 1.00 0.22	 Not limited 	
91A: Swygert	 Very limited Restricted permeability Depth to saturated zone Too acid	 1.00 1.00 0.08	 Very limited Depth to saturated zone Droughty 	 1.00 0.07	 Very limited Depth to saturated zone 	 1.00
91B: Swygert	 Very limited Restricted permeability Depth to saturated zone Too acid	 1.00 1.00 0.08	 Very limited Depth to saturated zone Droughty	 1.00 0.11 	 Very limited Depth to saturated zone 	 1.00
91B2: Swygert	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00 	 Very limited Depth to saturated zone Droughty	 1.00 0.31	 Very limited Depth to saturated zone	 1.00
91C2: Swygert	 Very limited Restricted permeability Depth to saturated zone Slope	 1.00 1.00 0.32	 Very limited Depth to saturated zone Droughty	 1.00 0.52	 Very limited Depth to saturated zone 	 1.00

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91C3: Swygert	 Very limited Restricted permeability Depth to saturated zone Slope	 1.00 1.00 0.32	Depth to	 1.00 1.00 1.00 0.86	saturated zone Restricted permeability	 1.00 1.00
103A: Houghton	 Very limited Depth to saturated zone Ponding	1	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Depth to	 1.00 1.00
104A: Virgil	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	1.00
105A: Batavia	 Not limited 	 	 Not limited 	 	 Not limited 	
105B: Batavia	 Somewhat limited Slope 	 0.08	 Very limited Water erosion 	 1.00	 Not limited 	
105C2: Batavia	 Very limited Slope 		 Very limited Water erosion Slope	 1.00 0.10	 Not limited 	
125A: Selma	 Very limited Ponding Depth to saturated zone	 1.00 1.00		 1.00 1.00		 1.00 1.00
131B: Alvin	 Somewhat limited Too acid Slope	 0.32 0.02	 Somewhat limited Droughty 	 0.01 	 Not limited 	
131C2: Alvin		1		 0.06 	 Not limited 	
132A: Starks		1.00	 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1.00
134A: Camden	 Somewhat limited Too acid	1	!	 	 Not limited 	
134B: Camden	•		Water erosion		 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		 Drip or trickle irrigation	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134C2: Camden	 Somewhat limited Slope Too acid	 0.98 0.08	!	 1.00 0.06	 Not limited 	
134D2, 134D3: Camden	 Very limited Slope Too acid	 1.00 0.08	 Very limited Water erosion Slope	 1.00 0.98	 Not limited 	
134F: Camden	 Very limited Slope Too acid	 1.00 0.08	<u>-</u>	 1.00 1.00	 Not limited 	
146A: Elliott	Depth to saturated zone Restricted permeability	 1.00 1.00 0.44	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone 	 1.00
146B: Elliott	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
146B2: Elliott	 Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.44	saturated zone	 1.00 0.16	 Very limited Depth to saturated zone	 1.00
147B2: Clarence	 Very limited Restricted permeability Depth to saturated zone Droughty	 1.00 1.00 0.30	 Very limited Depth to saturated zone Droughty	 1.00 1.00	 Very limited Depth to saturated zone	 1.00
148A: Proctor	 Not limited 	 	 Not limited 	 	 Not limited 	
148B: Proctor	 Somewhat limited Slope 	 0.02	 Not limited 	 	 Not limited 	
148C2: Proctor	 Somewhat limited Slope 	 0.98 	 Very limited Water erosion Slope	 1.00 0.06	!	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149A: Brenton	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00
151A, 151B: Ridgeville	 Very limited Depth to saturated zone Too acid	 1.00 0.01	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
152A: Drummer	 Very limited Ponding Depth to saturated zone	 1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00		 1.00 1.00
154A: Flanagan	 Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 0.31 0.08	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone 	 1.00
171A: Catlin	 Somewhat limited Depth to saturated zone Restricted permeability Too acid	 0.76 0.31 0.08	 Not limited - - 	 	 Not limited 	
171B: Catlin	 Somewhat limited Depth to saturated zone Restricted permeability	 0.68 0.31	 Very limited Water erosion 	 1.00 	 Not limited 	
171B2: Catlin	 Somewhat limited Depth to saturated zone Restricted permeability	 0.76 0.31	 Very limited Water erosion 	 1.00 	 Not limited 	
171C2, 171C3: Catlin	 Somewhat limited Slope Depth to saturated zone Restricted permeability	 0.98 0.76 0.31	 Very limited Water erosion Slope 	 1.00 0.06 	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	1
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
193C2: Mayville	Somewhat limited Slope Depth to saturated zone Restricted permeability Too acid	 0.98 0.68 0.31 	 Very limited Water erosion Slope 	 1.00 0.06 	 Not limited 	
198A: Elburn	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00
199A: Plano	 Not limited 		 Not limited 	 	 Not limited 	
199B: Plano	 Somewhat limited Slope	0.02	 Not limited 	 	 Not limited 	
199C2: Plano	 Somewhat limited Slope 	 0.98 	 Very limited Water erosion Slope	 1.00 0.06	 Not limited 	
206A: Thorp	 Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00 		 1.00 1.00
210A: Lena	 Very limited Depth to saturated zone Ponding	 1.00 1.00	 Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
219A: Millbrook	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	1.00
223B, 223B2: Varna	 Very limited Restricted permeability Depth to saturated zone	 1.00 0.68	 Not limited 	 	 Not limited 	
223C2: Varna	 Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.68 0.32	 Not limited 	 	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	 Irrigation (al application meth 		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	 Rating class and limiting features	Value
223C3: Varna	 Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.68 0.32	 Very limited Water erosion Droughty 	 1.00 0.89 	 Not limited 	
223D2: Varna	 Very limited Restricted permeability Slope Depth to saturated zone Too acid	 1.00 1.00 0.68 0.01	 Somewhat limited Slope 	 0.22 	 Not limited 	
223D3: Varna	Very limited Restricted permeability Slope Depth to saturated zone	 1.00 1.00 0.68	 Very limited Water erosion Droughty Slope	 1.00 0.52 0.22 	 Not limited 	
228B: Nappanee	 Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone Water erosion Droughty	 1.00 1.00 0.44	 Very limited Depth to saturated zone	 1.00
228C2: Nappanee	 Very limited Restricted permeability Depth to saturated zone Slope Droughty	 1.00 1.00 0.32 0.16	 Very limited Depth to saturated zone Droughty 	 1.00 1.00 	 Very limited Depth to saturated zone 	1.00
228C3: Nappanee	Very limited Restricted permeability Depth to saturated zone Droughty Slope	 1.00 1.00 0.88 0.32	 Very limited Droughty Depth to saturated zone	 1.00 1.00 	 Very limited Depth to saturated zone 	1.00
232A: Ashkum	 Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.31	 Very limited Ponding Depth to saturated zone	 1.00 1.00 	 Very limited Ponding Depth to saturated zone	 1.00 1.00

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features		limiting features		limiting features	<u> </u>
233A: Birkbeck	 Somewhat limited	 	 Not limited	 	 Not limited	
	Depth to saturated zone	0.86			 	İ
	Restricted permeability Too acid	0.31 0.14				
	100 acid					
233B:	 Companies limited		 		Not limited	
Birkbeck	Depth to saturated zone Too acid	0.86	Very limited Water erosion 	1.00	Not limited 	
	Slope	0.14				
233C2:	 		 		 	
Birkbeck	!	1	Very limited	!	Not limited	ļ
	Slope Depth to	0.98	!	1.00	 	
	saturated zone		Siope			İ
	Restricted	0.31		į	j	j
	permeability			ļ		ļ
	Too acid	0.08			 	
234A:						ļ
Sunbury	Very limited Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone	1	saturated zone	1
	Restricted	0.31		į	j	j
	permeability			ļ		ļ
	Too acid	0.08	 	 	 	
235A:		į		į		
Bryce	: -	:	Very limited	:	Very limited	
	Restricted permeability	1.00	Ponding Depth to	1.00		1.00 1.00
	Ponding	1.00	· -		saturated zone	
	Depth to	1.00	Droughty	0.68	!	ļ
	saturated zone Too acid	0.08	 -		 	
	100 acid				 	
236A:						ĺ
Sabina	Very limited Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Restricted	0.31	İ	İ	į	İ
	permeability					
	Too acid	0.08	[
238A:		į			<u> </u>	į
Rantoul	-	1.00	Very limited Ponding	1 00	Very limited Ponding	11 00
	Restricted permeability	11.00	Ponding Depth to	1.00	Ponding Depth to	1.00 1.00
	Ponding	1.00	saturated zone		saturated zone	į
	Depth to	1.00	Droughty	0.08		ļ
	saturated zone	1	1	1	I	1

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		 Sprinkler irrigation		Drip or trickle	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241C3: Chatsworth	 Very limited Restricted permeability Droughty Depth to saturated zone Slope	 1.00 1.00 0.98 0.32	 Very limited Restricted permeability Droughty Water erosion	 1.00 1.00 1.00	 Very limited Restricted permeability 	 1.00
0.4170					1	
241D3: Chatsworth	 Very limited Restricted permeability Droughty Slope Depth to saturated zone	 1.00 1.00 1.00 0.98	 Very limited Restricted permeability Droughty Water erosion Slope	 1.00 1.00 1.00 0.22	 Very limited Restricted permeability 	 1.00
241E3: Chatsworth	 Very limited Restricted permeability Slope Droughty Depth to saturated zone	 1.00 1.00 0.99 0.98	 Very limited Restricted permeability Droughty Water erosion Slope	 1.00 1.00 1.00 1.00	 Very limited Restricted permeability 	 1.00
241F, 241G: Chatsworth		 1.00 1.00 0.99 0.98	 Very limited Restricted permeability Droughty Slope	 1.00 1.00 1.00	 Very limited Restricted permeability 	 1.00
242A: Kendall	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	1.00
243A: St. Charles	 Not limited	 	 Not limited	 	 Not limited	
243B: St. Charles	•	 0.02	 Very limited Water erosion	 1.00	 Not limited 	
243C2: St. Charles	•	 0.98 	 Very limited Water erosion Slope	 1.00 0.06	 Not limited 	
244A: Hartsburg	Ponding	 1.00 1.00 		 1.00 1.00 		1.00

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	
2703			l			
278A: Stronghurst	 Very limited	1	 Very limited	1	 Very limited	
berongnarbe	Depth to	1.00	Depth to	1.00		1.00
	saturated zone	İ	saturated zone	İ	saturated zone	i
	Too acid	0.08				
278B: Stronghurst	 Very limited	l I	 Very limited	l I	 Very limited	
belonghar be	Depth to	1.00		1.00		1.00
	saturated zone		saturated zone		saturated zone	
	Too acid	0.08	Water erosion	1.00	İ	j
	Slope	0.02			[
0.500						
279B: Rozetta	 Somewhat limited	l I	 Very limited	l I	 Not limited	l
Nozoccu	Slope	0.02	! -	1.00		
				İ		i
280C2:						
Fayette			Very limited	!	Not limited	
	Slope	0.98	!	1.00		
	 	1	Slope	0.06	 	
290A, 290B:	 		 		 	i
Warsaw	Not limited	į	Not limited	į	Not limited	j
	[[[
290C2:		ļ		ļ		
Warsaw		:	Somewhat limited		Not limited	
	Slope Too acid	0.32	Droughty	0.41	 	I
	Droughty	0.02	 		! 	
		į		į		i
293A:	[[
Andres		1	Very limited	1	Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted	1.00	saturated zone	l I	saturated zone	l
	permeability		 		 	
	į -	į	İ	į	İ	İ
293B:	!				!	
Andres		1	Very limited	1	Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted	1.00	saturated zone	1	saturated zone	i
	permeability			i	 	i
	Slope	0.02		į		j
	!				!	
294B:	 		 		 	
Symerton	Very limited Restricted	1.00	Not limited	1	Not limited	I
	permeability	1.00	 		! 	
	Depth to	0.53		İ		i
	saturated zone	İ		į		i
	Too acid	0.08				
	Slope	0.02			[

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle	
	Rating class and limiting features	Value	Rating class and limiting features		Rating class and limiting features	Value
294C2: Symerton	 Very limited Restricted permeability Slope Depth to saturated zone Too acid	 1.00 0.98 0.80 0.44		 0.06 0.05 	 Not limited 	
295A, 295B:	 	 	 	 	 	
Mokena	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone	 1.00 	Very limited Depth to saturated zone	1.00
298B: Beecher	 Very limited Depth to	 1.00	 Very limited Depth to	 1.00	 Very limited Depth to	1.00
	saturated zone Restricted permeability Too acid	1.00 1.00 0.08	saturated zone	1.00 	saturated zone	
311B:						
Ritchey	Very limited Depth to bedrock Droughty 	1	Droughty	1	Very limited Depth to bedrock 	 1.00
314A:						
Joliet	Very limited	1.00 1.00 	Depth to saturated zone Depth to bedrock	1.00	Depth to saturated zone	 1.00 1.00 1.00
315B:		į		į		į
Channahon	Very limited Depth to bedrock Droughty	1	Very limited Depth to bedrock Droughty		Very limited Depth to bedrock 	1.00
317A: Millsdale		1.00 1.00 0.31	Depth to saturated zone	1.00	Depth to saturated zone	 1.00 1.00
318B: Lorenzo	 Somewhat limited Droughty	 0.51	 Very limited Droughty	 1.00	 Not limited 	
	J2		J2			
318C2: Lorenzo	 Somewhat limited Droughty Slope 	 0.73 0.32	 Very limited Droughty 	 1.00 	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	 Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
320B: Frankfort	 Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 0.14	Very limited Depth to saturated zone	 1.00
320C2: Frankfort	 Very limited Restricted permeability Depth to saturated zone Slope Droughty	 1.00 1.00 0.32 0.23	saturated zone	 1.00 0.91 	 Very limited Depth to saturated zone 	 1.00
325B: Dresden	 Somewhat limited Droughty 	 0.01	 Somewhat limited Droughty 	 0.21	 Not limited 	
325C2: Dresden	 Somewhat limited Slope	 0.32	 Somewhat limited Droughty	 0.09	 Not limited 	
327B: Fox	 Not limited 	 	 Very limited Water erosion Droughty	 1.00 0.24	 Not limited - 	
327C2: Fox	 Somewhat limited Slope Droughty	0.32	!	 1.00 0.71	 Not limited 	
327D2: Fox	 Very limited Slope 	 1.00 	 Very limited Water erosion Droughty Slope	 - 1.00 0.35 0.22	!	
330A: Peotone	 Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.31	 Very limited Ponding Depth to saturated zone	 1.00 1.00 		 1.00 1.00
344A: Harvard	 Not limited 	 	 Not limited 	 	 Not limited 	
344B: Harvard	 Somewhat limited Slope 	 0.02	 Very limited Water erosion	 1.00	 Not limited 	
344C2: Harvard	 Somewhat limited Slope 	 0.98 	 Very limited Water erosion Slope	 1.00 0.06	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		 Sprinkler irrigation		Drip or trickle	ė
	Rating class and limiting features	Value	Rating class and	Value		Value
	IIMICING Teacures	<u> </u>	limiting features	<u> </u>	limiting features	1
356A: Elpaso	Very limited Ponding Depth to saturated zone	 1.00 1.00	!	 1.00 1.00		 1.00 1.00
	Too acid	0.22	Bacurated Zone	i	sacuraced zone	i
		İ	İ	İ	İ	İ
375A: Rutland	Very limited Restricted permeability Depth to	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
	saturated zone			ļ		ļ
	Too acid	0.08	 -		 -	
375B: Rutland	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone 	 1.00
	Too acid	0.08				1
	Slope	0.02				
375B2: Rutland	Very limited Restricted permeability Depth to saturated zone Too acid Slope	 1.00 1.00 0.08 0.02	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone 	1.00
388B:			 		 	
	Very limited Restricted permeability Depth to saturated zone Too acid Slope	 1.00 0.68 0.08 0.02	Not limited	 	Not limited	
388B2:						
Wenona	Very limited Restricted permeability Depth to saturated zone Too acid Slope	 1.00 0.68 0.08 0.02	Very limited Water erosion	 1.00 	Not limited	
388C2:						
Wenona	Very limited Restricted permeability Slope Depth to saturated zone Too acid	 1.00 0.98 0.68 0.08	Very limited Water erosion Slope	 1.00 0.06 	Not limited	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		 Sprinkler irrigation		 Drip or trickle irrigation 	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
397F: Boone	 Very limited Droughty Slope Depth to bedrock Too acid	1.00	!	!	 Not limited 	
413B: Gale	 Somewhat limited Too acid Depth to bedrock	0.32	 Very limited Water erosion Depth bedrock	 1.00 0.71	 Not limited - 	
413C2: Gale	 Somewhat limited Slope Too acid Depth to bedrock	 0.32 0.32 0.01	 Very limited Water erosion Depth bedrock	 1.00 0.65 	 Not limited 	
435A: Streator	 Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.61		 1.00 1.00 	 Very limited Ponding Depth to saturated zone	 1.00 1.00
448B: Mona	 Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.68 0.02	 Not limited - -	 	 Not limited 	
448C2: Mona	 Very limited Restricted permeability Slope Depth to saturated zone	 1.00 0.98 0.68	 Somewhat limited Slope 	 0.06 	 Not limited 	
512B: Danabrook	Somewhat limited Depth to saturated zone Restricted permeability Slope	 0.68 0.31 0.02	 Not limited 	 	 Not limited 	
512C2: Danabrook		 0.98 0.68 0.31	 Very limited Water erosion Slope 	 1.00 0.06 	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
516A: Faxon	Very limited Ponding Depth to saturated zone Too acid Depth to bedrock	 1.00 1.00 0.08	 Very limited Ponding Depth to saturated zone Depth bedrock	 1.00 1.00 0.80	 Very limited Ponding	 1.00 1.00
527C2:		 	 	 	 	
	Somewhat limited Depth to saturated zone Slope Restricted permeability Too acid	 0.68 0.32 0.31 	Very limited Water erosion	 1.00 	Not limited	
527D2:		 		 	 	
Kidami	Very limited Slope Depth to saturated zone Restricted permeability Too acid	 1.00 0.68 0.31 	Very limited Water erosion Slope	 1.00 0.22 	Not limited	
530B:		 	 		 	
Ozaukee	Very limited Restricted permeability Depth to saturated zone	 1.00 0.68	Very limited Water erosion	 1.00 	Not limited	
530C2:			 			
Ozaukee	Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.98 0.32	Very limited Water erosion Droughty 	 1.00 0.06 	Not limited 	
530C3:			 		 	
Ozaukee	Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.76 0.32	Very limited Water erosion Droughty 	 1.00 0.30 	Not limited 	
530D2:		 	 	 	 	
Ozaukee	Very limited Restricted permeability Slope Depth to saturated zone Too acid	 1.00 1.00 0.98 0.14	Very limited Water erosion Slope Droughty	 1.00 0.22 0.06	Not limited	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
530D3:	i I	İ	 	İ	 	İ
Ozaukee	Very limited Restricted permeability Slope Depth to saturated zone	 1.00 1.00 0.99	Very limited Water erosion Droughty Slope	 1.00 0.42 0.22 	Not limited	
530E2:					! 	i
Ozaukee	Very limited Slope Restricted permeability Depth to saturated zone	 1.00 1.00 0.98	Very limited Water erosion Slope Droughty	 1.00 1.00 0.01 	Not limited	
530F:		i		i	 	
Ozaukee	Very limited Slope Restricted permeability Depth to saturated zone	 1.00 1.00 0.68	Very limited Water erosion 	 1.00 	Not limited	
541B:	 		 		 	l I
Graymont		 1.00 0.68 0.02 0.01	 Not limited 	 	 Not limited 	
541B2:		į		İ		i
Graymont	Very limited Restricted permeability Depth to saturated zone Slope	 1.00 0.68 0.08	Very limited Water erosion 	1.00	Not limited	
541C2:			 		 	
Graymont		 1.00 0.98 0.86	 Very limited Water erosion Slope	 1.00 0.06 	 Not limited 	
542A:	 	 	 	 	 	1
Rooks		 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	1.00

Table 20c.--Water Management--Continued

Map symbol and soil name	 Irrigation (al application meth 		Sprinkler irrigation		Drip or trickle	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542B: Rooks	 Very limited Depth to saturated zone Restricted permeability Slope	 1.00 1.00 0.02	Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
549B:	 		 		 	
Marseilles	Very limited Restricted permeability Too acid Slope	 1.00 0.08 0.02	Very limited Water erosion Depth to bedrock	1.00	Not limited	
549C2:	 		 		 	
Marseilles	Very limited Restricted permeability Slope Depth to bedrock Too acid Droughty	1.00 0.98	Water erosion Droughty	!	Not limited	
549D2:		İ		İ		i
Marseilles	Slope	1.00 1.00 	Water erosion Slope	!	Not limited 	
549F, 549G:		İ		İ		i
Marseilles	Slope	1.00 1.00 0.44	Water erosion Depth to bedrock	1.00		
554B:						İ
Kernan	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone 	 1.00 	Very limited Depth to saturated zone 	 1.00
560D2:	 	 	 	 	 	1
St. Clair	Very limited Restricted permeability Slope Depth to saturated zone Droughty	 1.00 1.00 0.68 0.11	Somewhat limited Droughty Slope	 0.84 0.22 	Not limited	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle	à
	Rating class and limiting features	Value	Rating class and limiting features	Value	 Rating class and limiting features	Value
560E: St. Clair	 Very limited Restricted permeability Slope Depth to saturated zone Droughty	 1.00 1.00 0.98 0.79	 Very limited Droughty Slope 	 1.00 1.00 	 Not limited 	
567B: Elkhart	 Not limited 		 Very limited Water erosion	 1.00	 Not limited 	
572A: Loran	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	1.00
572B: Loran	 Very limited Depth to saturated zone Restricted permeability Slope	 1.00 1.00 0.02	 Very limited Depth to saturated zone 	 1.00 	 Very limited Depth to saturated zone 	 1.00
572C2: Loran	Very limited Depth to saturated zone Slope	 1.00 0.98	 Very limited Water erosion Depth to saturated zone Depth to bedrock Slope	1.00 1.00 	saturated zone	 1.00
614A: Chenoa	 Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00
614B: Chenoa	 Very limited Depth to saturated zone Restricted permeability Slope	 1.00 1.00 0.02	Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
662B: Barony	 Somewhat limited Depth to saturated zone Slope	 0.68 0.02	 Very limited Water erosion 	 1.00 	 Not limited - 	

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle irrigation	•
	Rating class and limiting features	Value	Rating class and limiting features	1	Rating class and limiting features	Value
663B: Clare	 Somewhat limited Depth to saturated zone Slope Too acid	 0.68 0.08 0.01	 Not limited 	 	 Not limited 	
667B: Kaneville	 Somewhat limited Depth to saturated zone Slope	1	 Very limited Water erosion 	 1.00 	 Not limited 	
668B: Somonauk	 Somewhat limited Depth to saturated zone Too acid Slope	0.68	 Very limited Water erosion 	 1.00 	 Not limited 	
675B: Greenbush	 Somewhat limited Too acid Slope		!	 1.00	 Not limited 	
675C2: Greenbush	 Somewhat limited Slope Too acid	 0.98 0.08	!	 1.00 0.06	 Not limited 	
679B: Blackberry	 Somewhat limited Depth to saturated zone Slope	0.68	 Not limited 		 Not limited 	
680B: Campton	 Somewhat limited Depth to saturated zone Slope	1	 Very limited Water erosion 	 1.00 	 Not limited 	
712A: Spaulding	 Very limited Ponding Depth to saturated zone	 1.00 1.00		 1.00 1.00		 1.00 1.00
715A: Arrowsmith	 - Very limited Depth to saturated zone		 Very limited Depth to saturated zone		 Very limited Depth to saturated zone	1.00
732A: Appleriver	 Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.44	 Very limited Depth to saturated zone Depth bedrock	 1.00 0.10	 Very limited Depth to saturated zone	1.00

Table 20c.--Water Management--Continued

Map symbol and soil name	 Irrigation (al application meth		 Sprinkler irrigation		 Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
732B: Appleriver	 Very limited Depth to saturated zone Restricted permeability Slope	 1.00 1.00 0.02	saturated zone	 1.00 1.00	 Very limited Depth to saturated zone	 1.00
791A: Rush	 Somewhat limited Too acid 	 0.08	 Not limited 	 	 Not limited 	
791B: Rush	 Somewhat limited Too acid	 0.08	 Very limited Water erosion	 1.00	 Not limited 	
792A: Bowes	 Somewhat limited Too acid	 0.68	 Not limited 	 	 Not limited 	
792B: Bowes	 Somewhat limited Too acid 	 0.68	 Very limited Water erosion	 1.00	 Not limited 	
794G: Marseilles	 Very limited Slope Restricted permeability Too acid Depth to bedrock	1.00 1.00 0.44	Water erosion Depth to bedrock	1.00	Not limited	
Northfield	 Very limited Depth to bedrock Slope Droughty	:	Droughty Slope	 1.00 1.00 1.00 1.00	- 	 1.00
Ritchey		:	Slope	:	 	 1.00
802B: Orthents, loamy	Somewhat limited Restricted permeability Slope	 0.31 0.02	 Very limited Water erosion 	 1.00 	 Not limited 	
802D: Orthents, loamy	 Very limited Slope Restricted permeability	 1.00 0.31 	 Very limited Water erosion Slope 	 1.00 0.22 	 Not limited 	

Table 20c.--Water Management--Continued

Map symbol and soil name	 Irrigation (al application meth		 Sprinkler irrigation		Drip or trickle			
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value		
804D: Orthents, acid	 Very limited Low adsorption Restricted permeability Slope	 1.00 1.00 1.00	Very limited Restricted permeability Water erosion Droughty Slope	 1.00 1.00 0.30 0.15	 Very limited Restricted permeability 	 1.00 		
804G: Orthents, acid	 Very limited Low adsorption Slope Restricted permeability	 1.00 1.00 1.00	 Very limited Slope Water erosion Restricted permeability Droughty	 1.00 1.00 1.00 0.30	 Very limited Restricted permeability 	 1.00 		
805B: Orthents, clayey	 Very limited Restricted permeability Depth to saturated zone Droughty	 1.00 0.68 	 Very limited Restricted permeability Droughty Water erosion	 1.00 1.00 1.00	Very limited Restricted permeability	 1.00 		
814A: Muscatune	 Very limited Depth to saturated zone Too acid	 1.00 0.04	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone	 1.00 		
Buckhart	 Somewhat limited Depth to saturated zone	 0.68 	 Not limited 	 	 Not limited 			
817A: Channahon	 Very limited Depth to bedrock Droughty Too acid	:	 Very limited Depth to bedrock Droughty	 1.00 1.00	 Very limited Depth to bedrock 	1.00		
Hesch	 Somewhat limited Too acid Droughty Depth to bedrock	0.86	 Somewhat limited Depth to bedrock Droughty 	 0.97 0.71 	 Not limited 			
817B: Channahon	 Very limited Depth to bedrock Droughty Too acid Slope		 Very limited Depth to bedrock Droughty	 1.00 1.00 	 Very limited Depth to bedrock 	 1.00 		
Hesch	 Somewhat limited Depth to bedrock Droughty Slope Too acid	:	 Very limited Depth to bedrock Droughty 	 1.00 1.00 	 Not limited 			

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		 Sprinkler irrigation		 Drip or trickle irrigation	
	Rating class and	Value	Rating class and	Value	Rating class and	Value
	limiting features	<u> </u>	limiting features	<u> </u>	limiting features	<u>i</u>
0103						
818A: Flanagan	 Very limited	l I	 Very limited	l I	 Very limited	
1 Tunagan	Depth to	1.00		1.00	: -	1.00
	saturated zone		saturated zone		saturated zone	
	Restricted	0.31		į	İ	İ
	permeability	į	İ	į	İ	j
	Too acid	0.08		!	!	
Catlin	 Compatibat limited		 Not limited		 Not limited	
Catilii	Depth to	0.68	NOC IIMICEC	1	NOC IIMICEG	l
	saturated zone		 		 	İ
	Restricted	0.31		i	! 	1
	permeability	İ		i		i
	Too acid	0.08	İ	İ	İ	İ
820E: Hennepin	 Very limited	1	 Very limited	1	 Not limited	
nemepin	Slope	1.00		1.00	!	
	Restricted	1.00	1	1.00		i
	permeability	į	_	į		į
Casco	 Verv limited		 Very limited		 Not limited	
	Slope	1.00		1.00	!	i
	Droughty	0.39	Slope	1.00	İ	j
			Droughty	0.99	[
820G:	l I		 	 	 	
Hennepin	 Verv limited		 Very limited	İ	 Not limited	i
	Slope	1.00		1.00		i
	Restricted	1.00	<u>-</u>	1.00		i
	permeability	ĺ	İ	ĺ	İ	İ
Coggo	 Town limited		 		 Not limited	
Casco	Slope	1.00	Very limited Slope	1.00		l
	Droughty	0.81	Water erosion	1.00	 	i
			Droughty	1.00		
830: Landfills	Not mated		 Not rated		 Not rated	
Landillis	Not rated	1	NOT Fated 	1	NOT rated 	
864:		İ		İ		i
Pits, quarry	Not rated	ĺ	Not rated	ĺ	Not rated	İ
0.65			l			
865: Pits, gravel	 Not rated	l I	 Not rated	l I	 Not rated	l
1105/ glavel						i
969E2:	İ	į	İ	į	İ	İ
Casco	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Droughty	0.66	Slope	1.00		
	[[Droughty	1.00	 	
Rodman	 Very limited		 Very limited		 Not limited	
	Slope	1.00	Droughty	1.00		i
	Droughty	1.00	Slope	1.00		

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		Sprinkler irrigation		Drip or trickle		
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
969F:			 				
Casco	 Very limited	İ	 Very limited	i	Not limited	i	
	Slope	1.00	Slope	1.00			
	Droughty	0.90		1.00			
	 		Droughty	1.00	 		
Rodman	 Very limited	İ	 Very limited	i	Not limited	i	
	Slope	1.00		1.00		1	
	Droughty	1.00	Slope	1.00			
1103A:			 			Ì	
Houghton	Very limited	į	Very limited	į	Very limited	į	
	Depth to	1.00		1.00	Ponding	1.00	
	saturated zone		saturated zone		Depth to	1.00	
	Ponding	1.00	Ponding	1.00	saturated zone	1	
1480A:	İ	i		i		i	
Moundprairie		1	Very limited	1	Very limited		
	Ponding	1.00		1.00		1.00	
	Depth to saturated zone	1.00	Flooding Depth to	1.00		1.00	
	Flooding	0.80			saturated zone		
	ĺ	İ		İ	İ	İ	
3073A: Ross	 Somewhat limited						
ROSS	Flooding	0.80	Very limited Flooding	1.00	Very limited Flooding	1.00	
3076A:	ļ.	1	!	ļ	!	1	
Otter	: -	1	Very limited	1	Very limited		
	Ponding Depth to	1.00	Ponding Flooding	1.00		1.00	
	saturated zone		Depth to	1.00		1.00	
	Flooding	0.80	saturated zone	İ	saturated zone	İ	
3082A:			 				
Millington	 Verv limited		 Very limited	l	 Very limited		
J	Ponding	1.00		1.00	:	1.00	
	Depth to	1.00	Flooding	1.00	Flooding	1.00	
	saturated zone		Depth to	1.00	Depth to	1.00	
	Flooding	0.80	saturated zone		saturated zone	1	
3107A:	İ	i		i		i	
Sawmill			Very limited		Very limited		
	Ponding	1.00	Ponding	1.00	Ponding	1.00	
	Depth to saturated zone	1.00	Flooding Depth to	1.00	Flooding Depth to	1.00	
	Flooding	0.80	saturated zone		saturated zone		
	Too acid	0.01		İ		i	
22013							
3321A: Du Page	 Somewhat limited	1	 Very limited	 	 Very limited	1	
Du Tugo	Flooding	0.80	Flooding	1.00	:	1.00	
	!	[[
3451A: Lawson	 Vorus limited		 		 Very limited		
ша₩SUП	Depth to	1.00	Very limited Flooding	1.00	:	1.00	
	saturated zone		Depth to	1.00	Depth to	1.00	
			saturated zone		saturated zone		

Table 20c.--Water Management--Continued

Map symbol and soil name	Irrigation (al application meth		Sprinkler irrigation		Drip or trickle irrigation 			
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value		
24003								
3480A: Moundprairie	 Verv limited	 	 Very limited		 Very limited			
	Ponding	1.00	-	1.00		1.00		
	Depth to	1.00	Flooding	1.00		1.00		
	saturated zone	İ	Depth to	1.00	Depth to	1.00		
	Flooding	0.80	saturated zone		saturated zone	į		
3800A:					 			
Psamments	Somewhat limited	į	Very limited	į	Very limited	j		
	Flooding	0.80	Sandy textures	1.00	Flooding	1.00		
	Too acid	0.32	Flooding	1.00				
	Droughty	0.03	Wind erosion	1.00				
	 		Droughty	1.00	 			
7073A:						i		
Ross	Not limited		Not limited		Not limited			
8073A:								
Ross	Somewhat limited	!	Not limited		Not limited			
	Flooding	0.60	 		 			
8107A:		İ		İ	İ	İ		
Sawmill			Very limited		Very limited			
	Ponding	1.00	Ponding	1.00	Ponding	1.00		
	Depth to	1.00	Depth to	1.00	Depth to	1.00		
	saturated zone		saturated zone		saturated zone			
	Flooding 	0.60			 			
8151A:				į		į		
Ridgeville		1	Very limited	:	Very limited			
	Depth to	1.00	Depth to	1.00	:	1.00		
	saturated zone	10.60	saturated zone		saturated zone			
	Flooding Too acid	0.60	 		 			
	100 acid		 		 			
8404A:								
Titus	Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00		
	Depth to	1.00	Depth to	1.00	Depth to	1.00		
	saturated zone		saturated zone		saturated zone			
	Restricted	1.00		i		i		
	permeability	İ		i		i		
	Flooding	0.60				į		
8451A:	[[[1		
Lawson	Very limited		Very limited		Very limited			
	Depth to	1.00		1.00	Depth to	1.00		
	saturated zone		saturated zone	[saturated zone	1		
	Flooding	0.60	 		 			
8516A:						1		
Faxon			Very limited		Very limited			
	Ponding	1.00	Ponding	1.00	Ponding	1.00		
	Depth to	1.00	Depth to	1.00	Depth to	1.00		
	saturated zone		saturated zone		saturated zone	1		
	Flooding	0.60	Depth to bedrock	0.80		1		
	Too acid	0.08	 		 -	1		
	Depth to bedrock	0.06	I		I	1		

Table 21.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentage sieve n	e passinumber	ng	 Liquid	 Plas-
and soil name					>10	3-10	İ				limit	
	i	İ	Unified	AASHTO	inches	inches	4	10	40	200	i	index
	In		!	!	Pct	Pct	ļ	ļ .		[Pct	
23B:	 		 	 		 		l I	 	 	l I	
Blount	0-6	Silt loam	CL	A-4, A-6	0	0-5	95-100	95-100	90-100	80-95	25-40	8-20
	6-10	Silt loam	CL	A-4, A-6	0	0-5	95-100	95-100	90-100	80-95	20-35	8-18
	10-23	Silty clay loam,	CL, CH	A-6, A-7-6	0-1	0-5	95-100	85-98	70-97	65-95	35-60	15-35
	 	silty clay, clay loam	 	 		 		 	 	 	 	
	23-34	Silty clay loam, clay loam, silty		A-6, A-7-6 	0-1	0-5	95-100 	80-95	65-93	60-90 	35-55	10-30
	 34-60 	clay Silty clay loam, clay loam	 CT 	 A-6, A-7-6 	0-1	 0-10 	 90-100 	 80-93 	 65-92 	 60-90 	 30-50 	 10-25
51A:					į	İ	į	İ	İ	İ	į	İ
Muscatune	 0_16	 Cil+ loam	CL, CL-ML, ML	 	0	 0	100	 100	 97-100	 05_100	 24-27	 4-14
Muscatume		Silty clay loam,		A-4, A-6 A-6	0	0 0	100	100		95-100		14-14
	10 11	silt loam		1			100	100	37 100	33 100	33 10	11 20
	22-46	!	ML, CL	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	46-60	Silt loam, silty		A-6, A-4	0	0	100	100	96-100	1		7-18
		clay loam			į	İ		į		į	į	į
60C2:			 	 		 		 	 	 	 	
La Rose	0-7	Loam	CL	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	8-15
	7-21	Clay loam	CL	A-6, A-7-6	0	0	95-100	90-100	85-100	60-85	30-45	15-25
	21-60	Loam, silt loam	CL	A-6, A-4	0	0-5	95-100	85-100	75-95	50-80	25-40	10-20
60D2:						İ		İ	İ		ĺ	
La Rose	0-7	Loam	CL	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	8-15
	7-20	Clay loam	CL	A-6, A-7-6	0	0	95-100	90-100	85-100	60-85	30-45	15-25
	20-60	Loam, silt loam	CL	A-6, A-4	0	0-5	95-100	85-100	75-95	50-80	25-40	10-20
61A:						İ		İ	İ		ĺ	
Atterberry	0-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	24-37	6-16
	9-17	1	1 -	A-4, A-6	0	0	100	100	95-100	1		7-18
	17-48		ML, CL	A-6, A-7-6	0	0	100	100	95-100	95-100	37-46	16-25
		silt loam										
	48-60 	Silt loam	CL, ML	A-6, A-4 	0	0 	100	100 	95-100 	95-100 	24-37	7-18
61B:	İ		İ	İ	į	İ	İ	į	İ	į	į	į
Atterberry		1	CL-ML, ML, CL		0	0	100	100	95-100	1		6-16
	9-13	1	1 -	A-4, A-6	0	0	100	100	95-100	1		7-18
	13-48	silt loam	CL, ML 	A-6, A-7-6 	0	0 	100 	100 	95-100 	95-100 	37-46 	16-25
	48-60 	Silt loam	ML, CL	A-6, A-4	0	0 	100	100 	95-100 	95-100 	24-37 	7-18
	1	1	I	I	1	I	1	1	I	I	1	1

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragments		Percentage passing sieve number				 Liquid	
and soil name			Unified	AASHTO	>10	3-10		10	40	200	limit	ticity index
	In		Unitied	AASHIO	Pct	Pct	-	1 10	1 - 20	200	Pct	Index
İ			Ì	İ	j	į į		j	İ	į	İ	İ
67A:												
Harpster		Silty clay loam	ML, CL	A-7-6	0	0	100	1 -			40-46	
		Silty clay loam	CL	A-7-6, A-6	0	0	100				37-46	
		Silt loam	CL	A-6, A-4	0	0	100			1	24-37	
	56-60	Loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	70-90	50-70	22-33	4-14
68A:			 	 	l	 			l I	 	l İ	
Sable	0-19	Silty clay loam	CH, CL	A-6, A-7-6	0	0	100	100	98-100	95-100	30-55	15-30
		Silty clay loam	CH, CL	A-6, A-7-6	0	0	100	100	98-100	95-100	35-60	15-35
	23-47	Silty clay loam,	CL, CH	A-6, A-7-6	0	0	100	100	98-100	95-100	35-55	15-35
		silt loam	İ	İ	İ	į i		İ	İ	į	İ	İ
	47-60	Silt loam, silty	CL	A-6	0	0	100	100	98-100	95-100	25-40	10-20
		clay loam	İ	İ	j	į į		İ	ĺ	ĺ	ĺ	ĺ
86B:			l I	 								
Osco	0-14	Silt loam	CL, ML	A-6, A-4	0	 0	100	100	100	95-100	35-45	7-20
		Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	100		40-50	15-25
		silt loam				i						
	55-60	Silt loam,	ML, CL	A-6, A-4	0	0	100	100	100	95-100	35-45	7-25
		silty clay	i	i	i	i i		i	İ	i	İ	İ
j		loam	Ì	İ	j	į į		j	į	į	į	į
0.570												
86C2:							 100	100				
Osco		Silt loam	CL, ML	A-6, A-4	0	0 0	100	100		95-100		10-20
	9-34	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	1 100	95-100	95-100	40-50	15-25
	34-60	Silt loam,	CL, ML	 A-6, A-4	0	 0	 100	100	 05_100	 95-100	25_45	 7-25
	34-60	silty clay	CL, ML	A-0, A-4	0	0	1 100	1 100	33-100	33-100	33-43	7-25
		loam			i	 		1	 	 	l I	l I
		l							İ	 	i i	
87A:									İ	! 	i i	
Dickinson	0-8	Sandy loam	SC-SM, SC, SM	A-4. A-2-4	i o	0	100	100	63-76	24-50	17-26	3-11
			SC, SC-SM, SM		0	0	100	100		24-50		4-11
		sandy loam				i						
	20-31		SC-SM, SC, SM	A-4	0	0	100	100	63-87	24-50	17-26	4-12
		sandy loam	İ	i	i	i i		i	İ	i	İ	İ
	31-36	Loamy sand, loamy	SM, SC-SM,	A-2-4, A-3	0	0	100	100	55-80	7-25	9-15	NP-5
		fine sand, fine	SP-SM	i	i	i i		i	İ	i	İ	İ
		sand	İ	i	i	į i		į	i	i	i	İ
	36-60	Sand, loamy fine	SP-SM, SM	A-2-4, A-3	0	0	100	100	50-80	7-25	9-14	NP-5
		sand, loamy sand		İ	İ	į i		İ	İ	İ	İ	İ
			1	1	İ	ı i						

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments	1	rcentag sieve n	e passi	ng	Liquid	 Plas-
and soil name	Depen	ODDIT CONCUIC		I	>10	3-10	' 	DICTO II	umber			ticity
and boll name			Unified	AASHTO	1	inches	4	10	40	200		index
	In			<u> </u>	Pct	Pct		İ			Pct	
87B:												
Dickinson	0-9	Sandy loam	SM, SC-SM, SC		0	0	100	100	63-76			2-8
	9-17	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	100	63 - 87	24-50	19-25	3-9
	 17_33	Sandy loam, fine	SC SC-SM	 A-4	0	 0	100	100	65-87	25-50	17-22	4-9
	1, 33	sandy loam						100				1
	33-41	Loamy sand, loamy	SC-SM, SM	A-2-4, A-3	0	0	100	100	58-80	7-25	10-20	NP-5
	 	fine sand, fine sand	 	 				 		 		
	41-60	Sand, loamy fine	SP-SM, SM	A-2-4, A-3	0	0	100	100	50-80	7-25	6-16	NP-5
		sand, loamy sand	į	į	į	į	į	į	į	į	į	į
87C2:								 				
Dickinson	0-11	Sandy loam	SC-SM, SC, SM	A-4, A-2-4	0	0	100	100	63-76	24-50	17-30	3-11
	11-29 	Fine sandy loam, sandy loam	SC-SM, SC, SM	A-4	0 	0	100	100 	63-87	24-50	17-30	4-12
	29-35	Loamy sand, loamy	SM, SC-SM,	A-2-4, A-3	0	0	100	100	55-80	7-25	9-20	NP-5
	 	fine sand, fine sand	SP-SM	 			 	 		 		
	35-60 	Sand, loamy fine sand, loamy sand		A-2-4, A-3	0	0	100	100	50-80	7-25	9-14	NP-5
88B:			l I	 								
Sparta	 0-14	Loamy sand	SM	 A-4, A-2-4	0	0	 85-100	 85-100	 50-95	10-50	0-14	 NP
bpul cu		Loamy sand, fine	1	A-2-4, A-3,	0	0	1		50-95	5-50	0-14	NP
	i	sand, sand		A-4		İ						i
	47-72	Stratified sand	SP-SM, SP, SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
		to loamy sand	ļ	ļ				ļ				
88D:	 			 		l I	 	l I	l I	 	1	
Sparta	0-8	Loamy sand	SM	A-4, A-2-4	0	0	85-100	 85-100	50-95	10-50	0-14	NP
-	8-17	Loamy sand	SM	A-4, A-2-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	17-33	Loamy sand, fine	SP-SM, SM	A-2-4, A-3,	0	0	85-100	85-100	50-95	5-50	0-14	NP
		sand, sand		A-4								
	33-72	Stratified sand	SP, SM, SP-SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
		to loamy sand	l I	 								
91A:			i	i i								
Swygert	0-12	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	98-100	95-100	85-98	35-45	15-21
	12-26	Silty clay,	CH, CL, MH	A-7-6	0	0	100	98-100	95-100	85-98	45-60	22-35
	06.55	clay										
		Silty clay, clay		A-7-6 A-7-6	0	0-2			85-100 80-100		45-55	20-32
	1 21-60	Silty clay, clay, silty clay loam	CL, CH, MH	A- / - b	0	0-3	 35-T00	 85-T00	 80-T00	/U-95 	45-60	∠0-32
	 	sircy cray roam	[]	 	İ			l I				
		1	· ·			1	1	1	1	1		1

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragments		Percentage passing sieve number				 Liquid	 Plas
and soil name	-			I	>10	3-10	i				limit	ticit
į		j	Unified	AASHTO	inches	inches	4	10	40	200	į	index
	In	!	!	!	Pct	Pct	ļ .	ļ .	ļ.	ļ .	Pct	
91B:		 	 	 	l I	 	 	 	 	 	 	
	0-11	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	98-100	95-100	85-98	35-45	15-21
		Silty clay, clay		A-7-6	0	0		98-100				22-35
i		Silty clay, clay		A-7-6	0	0-2		90-100				20-32
i		Silty clay, clay,		A-7-6	0	0-3					45-60	
į		silty clay loam										
91B2:		 	 	 	l I			 		 		
Swygert	0-7	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	98-100	95-100	85-98	39-46	18-25
		Silty clay, clay		A-7-6	0	0				,	45-60	
į		Silty clay, clay		A-7-6	0	0-2	97-100	90-100	85-100	75-95	45-55	20-32
į		Silty clay, clay,		A-7-6	0	0-3	95-100	85-100	80-100	70-95	45-60	20-32
į		silty clay loam		į	į	į	į	į	į	į	į	į
91C2:		 	 	 	l I	 		 		 	 	
Swygert	0-7	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	98-100	95-100	85-98	39-46	18-25
ĺ	7-18	Silty clay, clay	CH, CL, MH	A-7-6	0	0	100	98-100	95-100	85-98	45-60	22-35
į	18-36	Silty clay, clay	CL, CH, MH	A-7-6	0	0-2	97-100	90-100	85-100	75-95	45-55	20-32
ĺ	36-60	Silty clay, clay,	CL, CH, MH	A-7-6	0	0-3	95-100	85-100	80-100	70-95	45-60	20-32
ļ		silty clay loam			į				ļ			
91C3:		 						 		 		
Swygert	0-6	Silty clay loam	CL	A-7-6	0	0	100	98-100	95-100	85-98	41-48	20-25
	6-24	Silty clay, clay	CH, CL, MH	A-7-6	0	0	100	98-100	95-100	85-98	48-62	25-40
	24-60	Silty clay, clay, silty clay loam	CH, CL, MH	A-7-6	0	0-3	95-100	85-100	80-100	70-95	46-62	23-40
		SIILY CIAY IOAM										
103A:												
Houghton	0-11	Muck	PT	A-8	0	0					0 - 0	NP
I	11-60	Muck	PT	A-8	0	0					0-0	NP
104A:												
Virgil	0 - 7	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	90-100	20-35	8-20
	7-13	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	90-100	20-35	5-20
	13-49	Silty clay loam	CL	A-6, A-7-6	0	0	100	100		90-100	1	15-30
	49-58	Loam, sandy loam,		A-4, A-6, A-	0	0-3	95-100	90-100	75-100	40-85	25-45	5-25
		silty clay loam		7 - 6								
	58-60	Stratified loamy		A-2-4, A-4,	0	0-5	90-100	85-100	70-95	20-80	20-35	5-15
		sand to clay	CL-ML, CL	A-6								
I		loam										

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 . Plas
and soil name			Unified	AASHTO	>10 inches	3-10 inches	 4	10	40	200	limit 	ticit
	In				Pct	Pct	<u> </u> 				Pct	
105A:			 			 	 	 	 			
Batavia	0-9	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	23-38	5-15
	9-41	Silty clay loam, silt loam	CL, ML	A-6, A-7-6	0	0	100	100	95-100	90-100	27-47	12-28
	41-60	Stratified clay loam to sandy loam	SC, SC-SM, CL, CL-ML 	A-4, A-2-6, A-6 	0	0-5 	90-100 	80-90 	60-90 	30-70 	20-35 	4-15
105B:												
Batavia	0-9	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	23-38	5-15
	9-12	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	23-38	5-15
	12-45	Silty clay loam, silt loam	ML, CL 	A-6, A-7-6 	0	0 	100 	100 	95-100 	90-100 	27-47 	12-28
	45-60	Stratified clay loam to sandy loam	CL-ML, SC-SM, SC, CL 	A-6, A-2-6, A-4 	0	0-5 	90-100 	80-90 	60-90 	30-70 	20-35 	4-15
105C2:		 	 	 		 	 	 	 	 	l I	
Batavia	0-10	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	23-38	5-15
	10-50	Silty clay loam, silt loam	CL, ML	A-7-6, A-6	0	0 	100	100	95-100	90-100	27-47	12-28
	50-60	Stratified clay loam to sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A- 2-6 	0	0-5	90-100	80-90 	60-90 	30-70	20-35	4-15
125A:			 	 		 	 	 	 	 	 	
Selma	0-6	Loam	ML, CL	A-4, A-6	0	0	100	95-100	80-100	55-85	25-35	8-15
	6-13	Clay loam	ML, CL	A-6, A-7-6	0	0	100	95-100	80-100	55-85	30-43	11-21
	13-44	Loam, silty clay loam	•	A-6, A-4	0	0	100	85-100	80-95	38-85	23-41	7-20
	44-80	Stratified sand to silt loam 	SC, ML, CL- ML, SM, SC- SM	A-4, A-2-4 	0	0 	90-100 	80-100 	60-90 	10-70 	15-28 	1-9
131B:			 	 		 	 	 	 	 	 	
Alvin	0-8	Fine sandy loam	SM, SC-SM	A-4, A-2-4	0	0	100	100	80-95	30-45	15-25	NP-4
	8-11	Fine sandy loam, sandy loam, loamy fine sand	SM, SC-SM	A-4, A-2-4 	0	0	100	100	80-95	30-45	15-25	NP - 4
	11-25			 A-4, A-2-4, A-6	0	 0 	 100 	 95-100 	 70-100 	 30-55 	 15-40 	NP-15
	25-80		 SM, SP, SC-SM 	1	0	 0 	 95-100 	 95-100 	 45-95 	 4-35 	 15-20 	NP-4

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

			Classification		Frag	ments	1	_	e passi	ng		
Map symbol	Depth	USDA texture			.		:	sieve n	umber		Liquid	1
and soil name			Unified		>10	3-10	 4	1 10	1 40	1 000	limit	
			Unified	AASHTO		inches	4	10	40	200	<u> </u>	index
	In				Pct	Pct					Pct	
131C2:		 	 	 	1	 	 	l I	 	 	1	
Alvin	0-7	 Fine sandy loam	SM, ML	 A-2-4, A-4	0	0	100	100	 80-95	 30-60	15-25	NP-4
AIVIII		Fine sandy loam,	1 -		0	0	100		70-100			NP-15
	,	sandy loam, loam		A-6			100	33 100	70 100	30 33	1	
	42-80		SP, SM, SP-SM		0	0	 95_100	 95_100	 45-95	 4-35	15-20	 ND_4
	12 00	fine sandy loam,		,			33 100	33 100	13)3	1 33	1	
		loamy fine sand			i	i	! 	İ	i I		i	<u> </u>
		į -	İ	İ	İ	į	İ	İ	İ	İ	İ	į
132A:	0.10					 0			05 100			
Starks		1	CL, CL-ML, ML		0	0 0	100 100		95-100 95-100			5-15
		1		A-4, A-6	0	0	100					
	14-31		1		0	0				!	30-45	8-20
	31-43	Clay loam, silt loam, sandy loam	CL, SC, ML,	A-0, A-4	0	0	199-100	190-100	70-95	40-85	25-40	8-20
	12 60	Stratified loamy	1	 A-2-4, A-4,	0-1	0-5	 00 100	 00 100	 65 00	 15 00	5-30	NTD 1E
	43-00	sand to clay		A-6, A-2-6	0-1	0-5	30-100	 80-100	65-90	122-00	5-30	 NP-15
		loam	SM, SM 	A-0, A-2-0 		 	 	 	l I	 	i i	
				 		i i	 	 	l I	 	ŀ	
134A:		İ			İ	İ	İ	İ	İ	İ	İ	İ
Camden	0 - 7	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	24-37	6-15
	7-12	Silt loam	CL-ML, ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	6-15
	12-26	Silt loam, silty	CL	A-7-6	0	0	100	97-100	95-100	90-100	35-46	14-24
		clay loam										
	26-53	Clay loam, sandy	SC, ML, CL	A-4, A-6	0	0-5	90-100	90-100	70-85	45-70	25-33	8-14
		loam, silt loam										
	53-60	Stratified loamy	SM, SC-SM	A-2-4	0	0-5	90-100	70-100	35-60	14-40	19-25	1-7
		sand to sandy										
		loam			!						ļ	
134B:									 			
Camden	0 - 9	 Silt loam	CL-ML, ML, CL		 0	0	 100	 100	 95-100	 05 100	124 27	 6-15
Camden		1	CL, CL-ML, ML		0	0	100		95-100			6-15
		Silt loam Silty		A-4, A-6 A-7-6	0	0	100		95-100			14-24
	13-34	clay loam	Сп	A- / -0 	0	0	1 100	 <i> -</i> 100	 23-100	 	33-40	1 -4-24
	34-40	Clay loam, sandy	SC MI CI	 A-4, A-6	0	0-5	 90 - 1 0 0	 90 - 1 0 0	 70-85	 45-70	25-33	8-14
	34-40	loam, silt loam				0-5		50-100	, 0 - 03 	13-70	25-55	0-14
	40-60	Stratified loamy	SM. SC-SM	 A-2-4	0	0-5	 90 - 100	70-100	 35-60	114-40	19-25	1 1-7
	10 00	sand to sandy		• 		0 0		. 0 ± 00		-1 10		, - ,
		loam	 	1 			 	i I	I I	l I		
			! 	! 	1		! 	I I	! !	! 	i I	

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passi: umber	_	 Liquid	 Plas
and soil name	-			I	>10	3-10	İ				limit	ticity
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In			!	Pct	Pct					Pct	
134C2:				 		 	 	 		 	 	
Camden	0-7	Silt loam	ML, CL, CL-ML	 A-4. A-6	0	0	100	100	95-100	95-100	24-37	6-15
Cumacii		Silt loam, silty		A-7-6, A-6	0	0	100		95-100			14-24
	, , ,	clay loam	62	1		•	1 200	37 100	33 100	31 100	33 10	
	34-43		CL, SC	 A-4, A-6	0	0-5	 90_100	 90_100	 77-96	 48_77	 25_33	8-14
		· -		A-2-4, A-4,	0	0-5			40-89	1		1-7
	45-00	sand to sandy	BM, BC=BM	A-1-b		0-3	 	 				
134D2:				 		 	 	 	 	 	 	
Camden	0-7	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	24-37	6-15
	7-34	Silt loam, silty		A-7-6	0	0	100		95-100	1		14-24
		clay loam		İ		İ	İ	İ				i
	34-43		CL, SC, ML	A-4, A-6	0	0-5	90-100	90-100	70-85	45-70	25-33	8-14
		Stratified loamy		A-2-4, A-4,	0	0-5			35-60	1		1-7
		sand to sandy		A-1-b	į	 	<u> </u> 	 	İ	 	 	<u> </u>
134D3:				 		 	 	 		 	 	
Camden	0-7	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
	7-37	Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
		silt loam		İ	į	į	j	İ	į	İ	į	İ
	37-53	Sandy loam, loam	SC, SC-SM	A-4, A-2-4	0	0	100	95-100	80-90	35-50	20-30	5-10
	53-60	Loamy fine sand,	SP-SM, SM,	A-2-4, A-4,	0	0	100	95-100	70-90	5-40	6-20	NP-5
		loamy sand, fine sand		A-3	į	 	<u> </u> 	 	İ	 	 	<u> </u>
134F:				 		 		 	 	 	 	
Camden	0 - 9	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	9-31	Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	95-100	95-100	35-45	15-25
		silt loam										
	31-40	Sandy loam, loam,	SC-SM, SC	A-4, A-2-4	0	0	100	95-100	80-90	35-50	20-30	5-10
		clay loam		ĺ	İ	ĺ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
	40-60	Sandy loam, loamy	SC-SM, SP-SM,	A-2-4, A-3,	0	0	100	95-100	70-90	5-40	6-20	NP-5
		sand, sand	SM	A-4		ĺ			İ		ĺ	
146A:				 		 	 	 		 	 	
Elliott	0 - 6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	29-37	7-15
		!	CL	A-7-6	0	0	100	100	1	85-100		1
		Silty clay		A-7-6	0	0	100		90-100	1		18-30
				A-6, A-7-6	0	0-1	95-100		80-95			
		Silty clay loam	CL	A-6	0	0-3			80-95		1	
		1				1	1		1		1	

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	i	ments		rcentag sieve n	-	ng	 Liquid	1
and soil name				ļ	>10	3-10	ļ				limit	
			Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct		l I		 	Pct	
146B:			 	 	 	 		 	l I	 	l I	
Elliott	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	29-37	7-15
İ	9-13	Silty clay loam	CL	A-7-6	0	0	100	100	95-100	85-100	40-46	15-19
	13-17	Silty clay loam, silty clay	CL, CH	A-7-6 	0 	0 	100 	95-100 	90-100 	85-100 	40-52 	15-28
	17-35	Silty clay loam	CL	A-6, A-7-6	0	0-1	95-100	85-98	80-95	70-95	33-42	12-20
	35-60	Silty clay loam	CL	A-6	0	0-3	95-100	85-98	80-95	70-95	31-37	10-17
146B2:		l I	 	 	l I	 	 	 	l I	 	l I	
Elliott	0-8	Silty clay loam	CL, ML	A-7-6	0	0	100	100	95-100	85-100	40-46	15-19
		Silty clay loam,	CL, MH, CH	A-7-6	0 1	0	100			85-100		15-28
i	14-27	Silty clay loam	ML, CL	A-6, A-7-6	i o	0-1	95-100	85-98	80-95	70-95	33-42	12-20
į		Silty clay loam	ML, CL	A-6	0	0-3	95-100	85-98	80-95	70-95	31-37	10-17
147B2:		 	 		 	 	 	 	 	 	 	
Clarence	0-8	Silty clay loam	CL	A-6, A-7-6	0	0	95-100	95-100	90-100	85-100	30-45	15-25
İ	8-35	Silty clay, clay	MH, CH	A-7-6	0	0-5	95-100	95-100	90-100	85-100	50-65	25-40
İ	35-60	Silty clay, clay	CL, MH, CH	A-7-6	0	0-5	95-100	95-100	90-100	85-100	45-65	25-40
148A:			i	 	İ	! 	 	 	Ì	 	İ	
Proctor	0-11	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	10-20
İ	11-27	Silty clay loam, silt loam	CL	A-6, A-4, A-	0	0	100	100	95-100	85-100	25-50	10-25
	27-44	Clay loam, sandy loam, silt loam	CL-ML, CL, SC-SM, SC	A-4, A-6, A- 7-6, A-2-6	0 	0 	95-100 	85-100 	75-95 	30-85	20-45	5-25
	44-73	Stratified loamy sand to loam	SC-SM, SC,	A-6, A-4, A- 2-6	0 	0	90-100	80-98 	65-95 	15-85 	20-35	5-20
148B:		 	 		 	 	 	 	 	 	l I	
Proctor	0-11	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	90-100	25-40	10-20
	11-28	Silty clay loam, silt loam	CL	A-6, A-7-6, A-4	0 	0 	100 	100 	95-100 	90-100 	25-50 	10-25
	28-33	Loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-2-6, A-4, A-6, A-	0 	0 	90-100	85-100 	75-100	30-85	20-45	5-25
İ	33-60	Stratified loam to sandy loam		A-4, A-6, A- 2-4, A-2-6	0 	0	 85-100 	80-100	50-100 	 15-85 	20-40	5-20
148C2:		 	 	l I	 	 	 	 	 	 	 	
Proctor	0-8	Silt loam	CL	A-6, A-4	0	 0	100	100	95-100	 85-100	25-40	10-20
		Silty clay loam,	CL	A-6, A-7-6, A-4	0	0				85-100		10-25
İ	32-48	! " " " " " " " " " " " " " " " " " " "	SC-SM, CL,	A-2-4, A-4,	0	0	90-100	85-100	75-100	30-80	20-45	5-25
İ		loam, loam	CL-ML, SC	A-6, A-7-6, A-2-6	j I	 	j I	 	İ İ	 	j I	j I
į	48-60	Stratified loam	SC-SM, CL-ML,	A-6, A-4, A- 2-4, A-2-6	0	0	85-100	80-100	50-100	25-80	20-40	5-20

Map symbol	 Depth	USDA texture	Classif:	ication	i	ments		rcentag sieve n	e passi umber	_	 Liquid	
and soil name	 		Unified	AASHTO	>10 inches	3-10 inches	 4	10	40	200	limit	t1
	In	!			Pct	Pct					Pct	<u> </u>
149A:	 		 	 	 	[
Brenton	0-12	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	30-40	8
	12-28	Silty clay loam, silt loam	CL, ML	A-6, A-7-6 	0	0	100	100	95-100	85-100 	35-50	10
	28-44	Clay loam, silt loam, sandy loam		A-6, A-7-6 	0 	0 	100 	95-100 	90-100 	40-85 	30-45 	10
	44-60 	Stratified loamy sand to clay loam	CL, SC, SC- SM, CL-ML 	A-2-4, A-2-6, A-4, A-6 	0 	0 	95-100 	80-100 	80-100 	15-85 	20-35	5-
151A:												
Ridgeville	0-16	Fine sandy loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	100	75-100	20-50	15-25	2-
	16-40 	Fine sandy loam, loam, sandy clay loam		A-4, A-6 	0 	0 	98-100 	95-100 	75-95 	35-60 	20-35 	5·
	40-60	Loamy sand, sandy loam, fine sand		A-2-4, A-4 	0 	0 	95-100	90-100	65-95 	5-45 	15-20 	NP
151B:	İ											
Ridgeville		Fine sandy loam		'	0	0	100			20-50		
	į	Sandy loam, loam, sandy clay loam	CL, CL-ML	A-4, A-6 	0 	0 	į	İ	İ	35-60	İ	5
	56-60 	Loamy sand, sandy loam, fine sand		A-2-4, A-4 	0 	0 	95-100 	90-100 	65-95 	5-45	15-20	NP
152A:	 		 	 	 	 	 	 	 		 	
Drummer	0-14	Silty clay loam	CL	A-6, A-7-6	0	0	100	95-100	95-100	85-100	30-50	15
	14-41	Silty clay loam, silt loam	CL	A-6, A-7-6 	0 	0	100	95-100	95-100	85-100 	30-50	15
	İ	Loam, clay loam, sandy loam	İ	A-6, A-7-6 	0 	į	į	İ	İ	40-85 	İ	İ
	47-60 	Stratified loamy sand to silty clay loam	SC-SM, SC, CL-ML, CL 	A-2-6, A-4, A-6, A-2-4 	0 	0-5 	95-100 	80-98 	75-95 	15-85 	20-35 	7
154A:				 	İ	į		İ				
Flanagan	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	24-37	4
	18-38 	Silty clay loam, silty clay	CL, CH 	A -7-6 	0 	0	100	100 	95-100 	95-100	45-52 	22
	İ	Silty clay loam, silt loam	CL	A-6 	0 	0 	100 	İ	į	95-100 	į	14
				A-6, A-4	0					60-90		9
	49-60 	Loam	SC, SC-SM,	A-4, A-6 	0-1 	0-5	85-100 	80-100 	75-90 	45-70 	22-33	4

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passinumber	ng	 Liquid	 Plas-
and soil name					>10	3-10					limit	ticity
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct				 	Pct	
171A:				 						 		
Catlin	0-11	Silt loam 	CL-ML, CL 	A-4, A-6, A- 7-6	0	0 	100 	100 	95-100 	90-100 	25-45 	5-20
	11-44	Silty clay loam, silt loam	CL	A-6, A-7-6 	0	0 	100 	95-100 	90-100 	90-100 	30-50	15-30
	44-49	Clay loam, silty clay loam, loam	CL	A-6 	0	0-3	90-100 	85-100 	70-95 	50-80 	25-40	10-20
	49-60	Loam, clay loam, silty clay loam	CL-ML, CL 	A-4, A-6 	0	0-3	90-100	85-100 	70-90	45-70 	20-35	5-15
171B:		İ	İ	İ	į	İ	İ	İ	İ		İ	İ
Catlin		Silt loam	CL, CL-ML, ML		0	0	100		97-100			5-15
		Silty clay loam	1.5	A-7-6	0	0	100		97-100			16-21
		Silty clay loam	1	A-7-6, A-6	0	0	100	100			37-46	
		Clay loam	1.5	A-6	0	0					33-39	
	45-60	Loam 	CL, CL-ML, SC, SC-SM	A-4, A-6 	0-1	0-3	90-100 	85-95 	70-90 	45-70 	22-33	4-14
171B2:					İ							
Catlin	0-8	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	10-16
	8-41	Silty clay loam	1	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	41-47	Loam	1 -	A-6, A-4	0	0	90-98		80-95			8-16
	47-60	Loam 	CL, CL-ML, SC-SM, SC,	A-4, A-6 	0-1	0-3 	90-98 	85-95 	70-90 	50-70 	25-36 	8-16
171C2:		 		 		 	 	 	 		 	
Catlin	0-9	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	10-16
	9-40	Silty clay loam	CL	A-7-6, A-6	0	0	100	100			37-46	16-24
		Silty clay loam, silt loam	CL	A-6 	0	0 	100 	97-100 	95-100 	85-100 	35-40 	14-20
	50-55	Clay loam	CL	A-6	0	0					33-39	
	55-60	Clay loam	CL	A-6	0-1	0-2	90-98	80-95 	70-90 	50-80 	33-39	13-18
171C3:		İ		İ	İ	i	İ	İ	i		i	
Catlin		1	CL, ML	A-6	0	0	100				36-43	
	5-44	Silty clay loam, silt loam	CL, ML 	A-6 	0	0 	100 	97-100 	95-100 	85-100 	35-43 	15-21
		Silt loam, silty clay loam	CL, ML 	A-6 	0	0 	ĺ				35-43 	ĺ
	49-60	Silty clay loam	CL, ML	A-6 	0	0-2	90-100 	80-98 	80-90 	80-90 	36-43 	16-21

Table 21.--Engineering Index Properties--Continued

			Classif	ication	Frag	ments	Pe:	rcentag	e passi	ng		
Map symbol	Depth	USDA texture			_		:	sieve n	umber		Liquid	1
and soil name					>10	3-10					limit	
		<u> </u>	Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct			!		Pct	!
193C2:										 		
	0-6	Silt loam	OT OT ME	 A-4, A-6	 0	0	 100	100	 90-100		100.20	 4-15
Mayville			1 -		1 -	0	100					
	6-24	Silty clay loam,	CT	A-6, A-7-6	0	0	1 100	100	90-100	85-98	35-55	15-35
		silt loam										
	24-34	Clay loam, sandy	CL, SC	A-6, A-7-6	0-1	0-2	90-100	85-95	70-95	35-75	35-50	15-30
		clay loam, loam										
	34-60	Gravelly sandy	1	A-2-4, A-4,	0-1	0-5	85-98	80-95	60-95	30-70	15-35	4-15
		loam, loam,	SC, SC-SM	A-6								
		gravelly loam								 		
198A:				 		 	 	 	 	 	 	
Elburn	0-16	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	97-100	 95-100	24-37	4-14
i	16-49	Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	97-100	95-100	37-46	16-24
į		silt loam	İ	İ	i	i	İ	į	i	İ	i	i
į	49-58	Stratified sandy	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	85-100	55-75	20-30	5-15
i		loam to silt	İ	İ	i	i	İ	i	i	İ	i	i
į		loam	İ	İ	i	i	İ	į	i	İ	i	i
i	58-62	Stratified sandy	SC-SM, SM	A-2-4, A-4	0	0	95-100	90-100	50-85	20-45	19-25	1-7
i		loam to loamy	i	İ	i	i	İ	İ	İ	İ	i	i
į		sand	İ	İ	j	į	į	į	į	İ	į	į
			[!			!	ļ	!			
199A:												
Plano		Silt loam	CL, CL-ML, ML		0	0	100	100	95-100			5-15
	14-49	Silty clay loam,	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
		silt loam										
	49-60	Loam, clay loam,		A-4, A-6	0	0-1	90-100	85-95	60-90	40-65	30-45	10-25
		sandy loam	ML									
	60-72	Stratified loamy	1	A-2-4, A-4	0	0-5	90-100	70-95	40-80	15-55	20-25	NP-10
		sand to silt	ML, CL, SM,									
		loam	SC				 			 		
199B:				 			 	l I	 	 		
Plano	0-15	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	27-35	7-15
-		Silty clay loam,	1 -	A-6	0	0	100	100	95-100			11-25
		silt loam			1	i	ĺ	İ	i			
	45-55	Clay loam, loam,	CL	A-4, A-6	0	0	85-100	80-97	55-95	50-85	25-35	7-25
		sandy loam	i	į	i	i	İ	i	i		i	i
	55-72	Stratified loamy	CL, SM, SC.	A-2-4, A-4	0	0-5	90-100	70-95	40-80	15-55	20-25	NP-10
		sand to silt	ML, SC-SM,	,		i			i		i .	i
		loam	CL-ML	İ	i	i	İ	i	i	İ	i	i
		1		I I	1	i	! !	1	1	! !	i	

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas
and soil name	-			1	>10	3-10	İ				limit	
			Unified	AASHTO	inches	inches	4	10	40	200	i	index
	In		İ		Pct	Pct	İ		[Pct	
199C2:			 	 	 	 		 	 	 	 	
Plano	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
			CL	A-6	0	0	100	100		90-100		10-25
		silt loam		İ	İ	i		i		ĺ		ĺ
į	41-53	Clay loam, loam,	SC, SC-SM,	A-6, A-4, A-	0	0-1	90-100	85-95	60-90	35-75	20-45	5-25
j		sandy loam	CL, CL-ML	7 - 6	İ	İ	İ	į	į	İ	į	İ
j	53-60	Stratified loamy	SC, CL-ML,	A-2-4, A-4	0	0-5	90-100	70-95	60-90	15-70	0-25	NP-10
		sand to silt	SC-SM, SM	ļ.	ļ	ļ		!	[ļ	[
		loam	 	l I	 	 				 		
206A:												
Thorp	0-14	Silt loam	CL	A-4, A-6	0	0	100	95-100	90-100	85-100	20-40	8-20
	14-19	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	90-100	85-100	15-35	7-15
	19-43	Silty clay loam,	CL	A-6, A-7-6	0	0	100	95-100	90-100	85-100	35-50	15-30
		silt loam										
	43-50	Loam, clay loam,	SC, CL	A-4, A-6	0	0	90-100	85-100	70-95	40-90	20-40	10-20
		sandy clay loam										
	50-65	Stratified loamy	SC-SM, SM	A-2-4, A-4	0	0	85-100	80-95	35-80	25-50	15-25	2-7
		sand to loam	 	 	 	 	 	 	 	 	 	
210A:			İ	İ	İ	İ	İ	İ	İ	İ	İ	İ
Lena	0 - 8	Muck	PT	A-8	0	0					0-0	NP
	8-60	Muck	PT	A-8	0	0					0-0	NP
219A:			 	 	 	 				 		
Millbrook	0 - 7	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	20-35	5-15
j	7-24	Silty clay loam,	ML, CL	A-6, A-7-6	0	0	100	100	95-100	85-100	30-45	10-25
		silt loam										
	24-53	Clay loam, loam,	SM, ML, CL,	A-6, A-7-6	0	0-3	95-100	85-100	70-95	40-85	25-50	10-25
		sandy loam	sc									
	53-80	Stratified loamy		A-2-6, A-2-4,	0-1	0-5	90-100	80-100	65-90	15-80	5-30	NP-15
		sand to clay	ML, CL	A-4, A-6		!		!	!			
		loam	 	 	 	 				 		
223B:												
Varna	0-12	Silt loam	CL, ML	A-4, A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	12-30	Silty clay, silty	CL, CH, MH	A-6, A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
		clay loam, clay										
	30-48	Silty clay, silty	CL, ML	A-6, A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
		clay loam	ļ									
	48-60	Silty clay loam,	CL, ML	A-6, A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
		clay loam	ļ		ļ	ļ		!	!		!	
		1										

Map symbol	Depth	USDA texture	 	C	lassi	ficati	on	Fragi	ments		rcentag sieve n			Liquid	 . Plas
and soil name			i 	Unif	ied	 A	ASHTO	>10 inches	3-10	4	10	40	200	limit	ticit
	In		İ			İ		Pct	Pct					Pct	<u> </u>
223B2:			 						 						
Varna	0-7	Silt loam	CL,	ML		A-4,	A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	7-26	Silty clay, silty	CL,	CH,	MH	A-6,	A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
		clay loam, clay	İ			ĺ		į	ĺ	İ	İ	İ	İ	Ì	İ
	26-38	Silty clay, silty	CL,	ML		A-6,	A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
		clay loam													
	38-60	Silty clay loam,	CL,	ML		A-6,	A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
		clay loam													
223C2:									 						
Varna	0-9	Silt loam	CL,	ML		A-4,	A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	9-29	Silty clay, silty	CL,	CH,	MH	A-6,	A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
		clay loam, clay													
	29-50	Silty clay, silty	CL,	ML		A-6,	A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
		clay loam													
	50-60	Silty clay loam,	CL,	ML		A-6,	A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
		clay loam													
223C3:			 						 						
Varna	0-6	Silty clay loam	CL			A-6,	A-7-6	0	0-1	98-100	95-100	90-100	80-95	30-45	12-25
	6-16	Silty clay, silty	CL,	CH,	MH	A-6,	A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
		clay loam, clay													
	16-19	Silty clay, silty	CL,	ML		A-6,	A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
		clay loam													
	19-60	Silty clay loam,	CL,	ML		A-6,	A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
		clay loam													
223D2:									 						
Varna	0 - 9	Silt loam	CL,	ML		A-4,	A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	9-31	Silty clay, silty	CL,	CH,	MH	A-6,	A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
		clay loam, clay													
	31-36	Silty clay, silty	CL,	ML		A-6,	A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
		clay loam													
	36-60	Silty clay loam,	CL,	ML		A-6,	A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
		clay loam							[
223D3:								i	! 						
Varna		Silty clay loam					A-7-6	0-1						30-50	
	8-20	Silty clay, silty	CH,	CL		A-6,	A-7-6	0-1	0-10	95-100	85-100	80-100	75-95	35-56	15-29
		clay loam, clay													
	20-60	Silty clay loam,	CL			A-6,	A-7-6	0-1	0-10	95-100	85-100	80-100	70-95	30-45	13-26
		clay loam									1			1	

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

and soil name		USDA texture						sieve n	umber		Liquid	Plas-
1		İ			>10	3-10					limit	ticity
			Unified	AASHTO	inches	inches	4	10	40	200	İ	index
	In	!			Pct	Pct					Pct	[
228B:		 	 	 				 	 	 		
Nappanee	0-4	Silt loam	CL	A-4, A-6	0	0-1	95-100	95-100	90-100	80-95	25-40	8-20
į	4-9	Silt loam	CL, CL-ML	A-4, A-6	0	0-1	95-100	95-100	90-100	80-95	20-35	5-18
	9-23	Silty clay, clay	CL, CH	A-7-5, A-7-6	0	0-2	95-100	90-100	85-100	80-95	40-70	20-40
	23-46	Silty clay, clay	CL, CH	A-6, A-7-6	0	0-2			85-100		30-50	15-30
	46-60	Silty clay loam, silty clay, clay	CL, CH 	A-6, A-7-6 	0-1	0-3	95-100	85-100 	80-100	70-95 	30-50	10-30
228C2:				 		 		 	l İ	 		
Nappanee	0-5	Silty clay loam	CL	A-6, A-7-6	0	0-1	95-100	95-100	90-100	80-95	30-45	10-30
į	5-8	Silty clay loam	CL	A-6, A-7-6	0	0-1	95-100	95-100	90-100	80-95	30-45	10-30
	8-23	Silty clay, clay	CL, CH	A-7-5, A-7-6	0	0-2	95-100	90-100	85-100	80-95	40-70	20-40
	23-27	Silty clay, clay	CL, CH	A-6, A-7-6	0	0-2	95-100	90-100	85-100	75-95	30-50	15-30
	27-80	Silty clay, silty clay loam, clay	CL, CH	A-6, A-7-6 	0-1	0-3	95-100	85-100 	80-100	70-95 	30-50	10-30
228C3:								 	 		 	
Nappanee	0 - 7	Silty clay loam	CL	A-6, A-7-6	0	0-1	95-100	95-100	90-100	80-95	36-48	16-25
	7-16	Silty clay, clay	CL, CH	A-7-6	0	0-2	95-100	90-100	85-100	80-95	53-66	29-39
	16-20	Silty clay, clay	CL, CH	A-7-6	0	0-2	95-100	90-100	85-100	75-95	48-61	25-35
	20-60	Silty clay, clay	CL, CH	A-7-6	0-1	0-3	95-100	85-100	80-100	70-95	48-57	25-32
232A:				 	İ				İ	 		
Ashkum	0-12	Silty clay loam	CL, CH	A-7-6	0	0	100		95-100			22-28
	12-29	Silty clay loam, silty clay	CL, CH	A-7-6 	0	0 	100 	97-100 	95-100 	85-100 	45-57 	22-32
	29-54	Silty clay loam	CL	A-6	0	0-1	95-100	85-98	80-95	70-95	33-45	12-22
	54-60	Silty clay loam	CL	A-6	0	0-3	95-100	85-98	80-95	70-95	33-39	12-17
233A:				 				 		 		
Birkbeck	0 - 8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
		1		A-4, A-6	0	0	100	100	100	95-100		7-20
	11-46	Silty clay loam, silt loam	CL, ML	A-6, A-7-6 	0	0 	100	100 	100	95-100 	35- 4 5 	15-25
	46-56	Loam, silty clay		A-4, A-6	0-1	0-5	85-100	80-100	70-90	45-70	25-35	8-15
		loam, clay loam	SC, ML						!			
	56-60	Loam, silt loam, clay loam	CL, SC-SM, SC, ML	A-4, A-6 	0-1 	0-5 	85-100 	80-100 	70-90 	45-70 	25-35 	5-15
233B:			 	 		 		 	 	 	 	
Birkbeck	0-4	Silt loam	CL, ML	 A-6	0	0	100	100	97-100	95-100	29-37	11-18
	4-9	1		A-6, A-4	0	0	100		97-100			7-18
į	9-54	· ·	!	A-7-6, A-6	0	0	100				37-46	16-25
į	54-60	Loam	CL, SC	A-6, A-4	0	0-1	85-100		70-90	'	25-33	8-14
İ	60-68	Loam 	CL, SC, SC- SM, CL-ML	A-4, A-6	0-1	0-3	85-100 	85-100 	70-90	45-70 	22-33 	4-14

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	 	Classi	ficat	ion	Frag	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas-
and soil name							>10	3-10					limit	
			U	Inified		AASHTO	inches	inches	4	10	40	200		index
	In						Pct	Pct					Pct	
233C2:		 	l I		-				 	 	l İ	 		
Birkbeck	0 - 9	Silt loam	CL,	CL-ML	A-4	1, A-6	0	0	100	100	95-100	90-100	20-35	5-15
i I	9-42	Silty clay loam, silt loam	CL,	ML	A - 0	5, A-7-6	0	0	100	95-100	95-100	90-100	30-50	10-25
i I	42-48	Loam, silty clay loam, clay loam	CL,	CL-ML, M	L A-4	1, A-6	0-1	0-5	95-100	80-100	70-100	50-85	25-40	5-20
	48-60	Loam, silt loam, clay loam	CL,	CL-ML	A - 4	1, A-6	0-1	0-5	95-100	80-100	70-100	50-85	20-40	5-20
234A:					-									
Sunbury	0 - 8	Silt loam	CL,	CL-ML, M	L A-4	1, A-6	0	0	100	100	95-100	90-100	24-37	4-14
	8-15	Silt loam, silty clay loam	CL,	CL-ML, M	L A-4	1, A-6	0	0 	100 	100 	95-100 	90-100 	24-37	4-14
 	15-36	Silty clay loam, silty clay	CL,	CH	A-1	7 - 6	0	0 	100 	100 	95-100 	95-100 	45-52	22-28
İ	36-43	Silty clay loam, silt loam	CL		A - 0	5	0	0	100	100	95-100	95-100	35-40	14-20
ĺ	43-47	Silt loam, loam	CL		A-6	5, A-4	0	0	100	90-100	75-90	60-90	25-33	9-13
	47-72	Loam	CL,	CL-ML	A-4	1, A-6	0	0	100	90-100	70-90	50-70	22-33	4-13
235A:														
Bryce	0-13	Silty clay	CH,	CL, MH	A-	7-6, A-7-5	0	0	100	100	95-100	85-98	45-60	20-30
		Silty clay, clay			A-	7 – 6	0-1	0-2			95-100			25-35
	45-58	Silty clay, clay	MH,	CH, CL	A-	7 – 6	0-1	0-3			90-100			20-35
	58-66	Silty clay, silty clay loam, clay	CH, 	CL, MH	A - 1	7-6, A-7-5	0-1	0-5	95-100	85-100 	80-100	75-95 	40-60	20-30
236A:		İ			i		İ							
Sabina		!	CL,	ML		1, A-6	0	0	100				25-35	
		Silt loam	CL			1, A-6	0	0	100	100	95-100			8-20
		Silty clay, silty clay loam	į	CL	A - 1		0	0	100 	100 	į	İ	45-60 	į
	43-50	Clay loam, loam, silt loam, silty clay loam			A - (5	0-1	0-3	95-100	90-100 	70-95 	50-80 	30-40	10-20
	50-80	Clay loam, loam, silt loam	CL		A - 6	5	0-1	0-5	 90-100 	 85-95 	 70-95 	 50-80 	25-35	10-15
238A:														
Rantoul				CL, CH	A-	7-6, A-7-5	0	0				,	40-60	18-30
		Silty clay, clay				7-5, A-7-6	0	0			90-100			20-40
	40-60	Silty clay loam, silty clay, clay		MH, CH		5, A-7-6, -7-5	0	0-2	95-100 	90-100	90-100	85-100 	38-65 	16-38

Table 21.--Engineering Index Properties--Continued

Map symbol	 Depth	USDA texture	Classif	ication	Fragi	ments	1	rcentag sieve n	e passi: umber	ng	 Liquid	 Plas-			
and soil name		İ			>10	3-10	İ				limit	ticity			
			Unified	AASHTO	inches	inches	4	10	40	200		index			
	In				Pct	Pct					Pct				
241C3:				 		 	A-7-6, A-7-5	0	0	100	100	95-100	90-100	50-65	25-35
	5-16	Silty clay, clay,		A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	45-75	20-45			
		silty clay loam	İ	İ	į	i	İ	i	i	į	i	İ			
	16-60	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	90-100	80-95	45-65	20-35			
		silty clay loam			į	ĺ					ĺ				
241D3:				 			 		 	 	 				
Chatsworth	0-2	Silty clay	MH, CH	A-7-6, A-7-5	0	0	100	100	95-100	90-100	50-65	25-35			
	2-22	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	45-75	20-45			
		silty clay loam													
	22-60	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	90-100	80-95	45-65	20-35			
		silty clay loam													
241E3:				 		 		 	 	 	 	 			
Chatsworth	0-7	Silty clay	CH, MH	A-7-6, A-7-5	0	0	100	100	95-100	90-100	50-65	25-35			
	7-21	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	45-75	20-45			
		silty clay loam													
	21-60	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	90-100	80-95	45-65	20-35			
		silty clay loam										 			
241F:				 		İ					İ				
Chatsworth	0-4	Silty clay loam	CL, MH, CH	A-7-6, A-6	0	0	100	100	95-100	90-100	30-55	10-30			
	4-24	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	45-75	20-45			
		silty clay loam													
	24-60	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	90-100	80-95	45-65	20-35			
		silty clay loam		 								 			
241G:						į					į				
Chatsworth	0-5	Silty clay loam	CL, MH, CH	A-7-6, A-6	0	0	100	100	95-100	90-100	30-55	10-30			
	5-20	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	45-75	20-45			
		silty clay loam				!		!			!				
	20-60	Silty clay, clay,	MH, CH, CL	A-7-6, A-7-5	0	0	100	95-100	90-100	80-95	45-65	20-35			
		silty clay loam		 		 		 		 	 	 			
242A:	İ			İ	İ										
Kendall		Silt loam	CL, CL-ML, ML	1 -	0	0	100		95-100			5-15			
		Silt loam		A-6, A-4	0	0	100		95-100			5-15			
		Silty clay loam	1 -	A-7-6, A-6	0	0	100	100			35-45				
		Loam, clay loam	1 1	A-6, A-4	0	0	95-100				25-35				
	58-80 	Stratified sandy loam to silt	CL-ML, CL, SC-SM, SC	A-4	0	0-3	90-100	80-98	0U-95	40-80	20-30	4-10			
		loam to silt	ac-sm, sc	I I	I I	I I	 	1	1	 	I I	 			
		Loam		! 	i i	i İ	 	i	İ	! 	I I	! 			
	1	I	T. Control of the Con	I .	1	1	1	1	1	1	1	1			

Map symbol	Depth	USDA texture	Classi	fication	Fragi	nents		rcentag sieve n	e passi: umber	_	 Liquid	 Plas-
and soil name					>10	3-10	İ				limit	!
		İ	Unified	AASHTO	inches	inches	4	10	40	200	į	index
	In				Pct	Pct					Pct	
0.40-												
243A: St. Charles	 0-9	 Silt loam	CL	 A-4, A-6	 0	 0	 100	 100		 95-100		 7-15
St. Charles		Silt loam	CL	A-4, A-6	0	0 0	100	100		95-100		10-20
	9-31	silt loam	CL	A-0	0	0	1 100	1 100	33-100	30-100	130-40	10-20
	 51_60	Stratified sandy	I GC CT.	A-4, A-6	1 0	 0	 90_100	 75_100	 75-95	 40_80	 20-35	8-20
	31-00 	loam, to clay		A-4, A-0	0	0	30-100 	75-100 	75-55	40-00	20-33	0-20
		loam		j			İ	İ	İ	İ	İ	
243B:						 	 	 	 	 	 	
St. Charles	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
be. charles	8-50	Silty clay loam,	CL	A-6	0	0	100	100		90-100		10-20
		silt loam										
	50-60	Clay loam, silt	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20
	İ	loam, sandy	İ	j	į	İ	į	į	į	İ	į	į
		loam, loam,	İ	į	İ		İ	İ	İ	ĺ	İ	ĺ
		stratified										
		sandy loam to										
		silt loam										
243C2:	 									 		
St. Charles	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
	8-41	Silty clay loam,	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-25
		silt loam										
	41-60	Clay loam, silt	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20
		loam, sandy						!				
		loam, loam								 		
244A:	 					 		 		 		
Hartsburg	0-17	Silty clay loam	ML, CL	A-7-6	0	0	100	100	97-100	95-100	40-46	15-19
	17-34	Silty clay loam,	CL	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
		silt loam										
	34-60	Silt loam	CL	A-6, A-4	0	0	95-100	90-100	90-100	85-100	24-37	7-18
278A:				i								
Stronghurst	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	7-11	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	20-35	5-15
	11-47	Silty clay loam,	CL	A-7-6, A-6	0	0	100	100	95-100	95-100	40-55	20-35
		silt loam										
	47-60	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	25-40	5-20
278B:												
Stronghurst	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	10-48	Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	95-100	95-100	40-55	20-35
		1	1	1	1		1	1	1	1	1	1

A-4, A-6

0

100

100 | 95-100 | 95-100 | 25-40 | 5-20

silt loam

CL-ML, CL

48-60 |Silt loam

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classi	fication	Frag	ments	,	_	e passi: umber	ng	 Liquid	 Plas-
and soil name				1	>10	3-10						ticity
			Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct					Pct	
279B:					 			 		 		
Rozetta	0 - 7	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	8-15
	7-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-30	5-15
	11-55	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	95-100	35-50	15-30
	55-60	Silt loam, silty clay loam	CL	A-4, A-6	0 	0	100	100 	95-100	85-100 	25-40	7-20
280C2:			 		 			 		 	 	
Fayette	0 - 8	Silt loam	CL	A-6, A-7-6,	0 	0	100	100	100	95-100	30-45	10-25
	8-64	Silty clay loam, silt loam	CL	A-6, A-7-6	0 	0	100	100	100	95-100	35-45	15-25
	64-80	Silt loam	CL	A-6, A-4	0 	0	100	100	100	95-100	30-40	10-20
290A:			İ		İ	İ	İ	i	İ	İ	İ	İ
Warsaw	0-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-98	70-95	20-30	4-15
	11-28	Sandy clay loam, loam, clay loam, silty clay loam	CL, ML, SC, SM 	A-4, A-6 	0 	0-3	90-100 	85-100 	70-95 	40-90 	20-40 	8-20
	28-32	Gravelly loam, gravelly sandy clay loam, gravelly clay loam, gravelly sandy loam	CL, GC, SC, SC-SM	A-2-4, A-2-6, A-4, A-6	0-1 	0-5	70-90 	60-75 	55-70 	30-60	20-35	5-20
	32-80	Stratified gravelly loamy sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1-a 	0-3	1-5 	30-80 	15-75 	7-20 	2-10 	0-15 	NP

Table 21.--Engineering Index Properties--Continued

 Map symbol	Depth	USDA texture	Classi	fication	Fragi	ments		rcentago sieve n	-	-	 Liquid	 Dlac
and soil name	рерсп	USDA texture	l			3-10	'	sieve n	umber		limit	
and soll hame			 Unified	AASHTO	1	inches	4	10	40	200		index
	In	<u> </u>	0111100	1111111111111111111111111111111111111	Pct	Pct	1	1	1	1	Pct	
			i İ		100	100	! 	i	i		100	
290B:			İ	i	İ	! 	<u> </u>	i	i	i	ì	i
Warsaw	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-98	70-95	20-30	4-15
j	10-24	Sandy clay loam,	CL, ML, SC,	A-4, A-6	0	0-3	90-100	85-100	70-95	40-90	20-40	8-20
		loam, clay loam,	SM									
		silty clay loam										
	24-34	Gravelly loam,	CL, GC, SC,	A-2-4, A-2-6,	0-1	0-5	70-90	60-75	55-70	30-60	20-35	5-20
		gravelly sandy	SC-SM	A-4, A-6	ļ			!	!			
		clay loam,										ļ
ļ		gravelly clay										
l I		loam, gravelly sandy loam	 	I								
l I	34-60	Stratified	GP, GP-GM,	 A-1-a	0-3	 1-5	 30-80	 15_75	 7-20	2-10	0-15	NP
 	31-00	gravelly loamy	SP, SP-SM	A-1-0	0-3	<u>1</u> -3	30-00	13-73	7-20	2-10	0-13	142
i		sand to		i			 	i	i		1	i
İ		extremely	İ	i	İ	İ	i	i	i	i	i	i
į		gravelly	İ	İ	İ	İ	į	İ	į	İ	İ	İ
ĺ		coarse sand	ĺ	İ			ĺ	ĺ	ĺ	İ	İ	ĺ
									[
290C2:	0 - 8	 Silt loam	OT NO				 0F 100	 90-100			100.00	4-15
Warsaw		Silt loam Sandy clay loam,	CL, CL-ML	A-4, A-6	0	0 0 - 3		85-100				8-20
	0-10	loam, clay loam,		A-1, A-0	0	0-3	30-100	63-100	10-33	40-90	20-40	8-20
		silty clay loam		İ		 	 	i	İ			i
ľ	16-27	Gravelly loam,	CL, GC, SC,	A-2-4, A-2-6,	0-1	0-5	70-90	60-75	55-70	30-60	20-35	5-20
İ		gravelly sandy	SC-SM	A-4, A-6	İ		i	i	i	i	i	i
j		clay loam,	İ	j	İ	İ	į	į	į	į	İ	į
		gravelly clay										
		loam, gravelly										
		sandy loam										
	27-60	Stratified	GP, GP-GM,	A-1-a	0-3	1-5	30-80	15-75	7-20	2-10	0-15	NP
		gravelly loamy	SP, SP-SM									ļ
		sand to				 						
		extremely gravelly	 	l I	l I	 	 	 	l I			1
		graverry coarse sand	 		l l	 	 		 			l I
i			İ								1	i
293A:		İ	İ	j	į	İ	į	İ	İ	İ	İ	İ
Andres		Silt loam	ML, CL	A-4, A-6	0	0		90-100				7-13
ļ	11-26	Clay loam, sandy,	ML, CL	A-6	0	0-1	95-100	85-100	75-95	50-80	31-39	11-18
		clay loam, loam										
		Silty clay loam	ML, CL	A-6	0			85-100		70-95		12-17
	50-60	Silty clay loam silt loam	CL, ML	A-6	0	0-3	 95-T00	85-100	80-95	/0-95	30-39	10-17
		SIIT TOWN	1	1	1	I	1	1	1	İ	1	1

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classi:	fication	Fragi	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas-
and soil name					>10	3-10					limit	-
			Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct		!	ļ		Pct	
293B:			l I			l I	 	 	l I	 	l I	
Andres	0-10	Silt loam	ML, CL	A-4, A-6	0	0	95-100	90-100	80-95	 65-90	29-33	7-13
		Clay loam, sandy		A-6	0	0-1	95-100	85-100	75-95	50-80	31-39	11-18
		clay loam, loam	ĺ		İ	ĺ	ĺ	ĺ		ĺ	ĺ	ĺ
	36-47		ML, CL	A-6	0	0-1	95-100	85-100	80-95	70-95	33-39	12-17
		silt loam										
	47-60	Silty clay loam, silt loam	ML, CL	A-6	0	0-3	95-100	85-100	80-95	70-95 	30-39	10-17
		Silt loam	 			 	 	 	1	 	 	
294B:			İ		i	İ	! 	<u> </u>			İ	!
Symerton	0-15	Silt loam	ML, CL	A-4, A-6	0	0	95-100	90-100	80-100	65-90	29-33	7-13
	15-19	Silty clay loam	ML, CL	A-6	0	0	95-100	90-100	80-100	70-95	31-37	10-15
	19-35	Gravelly clay	CL, ML, SC,	A-6, A-4	0	0-3	85-100	70-95	60-85	40-60	29-39	9-20
		loam, loam, clay	SM									
		loam, gravelly loam	 		l I	l I	 	 		 	l I	
	35-39	Silt loam, silty	CL. ML	A-6, A-4	0	0-1	 95-100	90-100	85-100	 75-95	28-39	7-18
		clay loam			i	i						
	39-60	Silt loam, silty	CL, ML	A-6, A-4	0	0-1	95-100	90-100	85-100	75-95	24-37	7-18
		clay loam				[[[[[
294C2:												
Symerton	0-8	 Silt loam	 ML, CL	 A-6, A-4	0	 0	 95_100	 90_100	 80-100	 65-90	 29_33	 7-13
by mer con			CL, ML, SC,	A-6, A-4	0				60-85			9-20
		loam, loam, clay			i	İ	i	i	i	İ	İ	i
		loam, gravelly										
		loam	!			!					!	!
	31-40	Silt loam, silty	CL, ML	A-6, A-4	0	0-1	95-100	90-100	85-100	75-95	28-39	7-18
	10 60	clay loam Silt loam, silty	CT MT	 A-6, A-4	0	 0-1	 0E 100	100 100	 85-100	 75 05		 7-18
	40-60	clay loam	CL, ML	A-0, A-4	0	0-1	93-100	30-100	63-100	/3-33 	24-37	/-10
			İ		i	İ		İ	İ	İ	İ	
295A:			ĺ		İ	ĺ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
Mokena		Silt loam	CL, ML	A-4, A-6	0	0			80-95			8-15
		Loam	CL, ML	A-6, A-4	0	0		1	80-95	!		8-15
	15-38	Clay loam, sandy clay loam, loam	CL, ML	A-6	0	0-1	95-100	85-100	75-95	50-80	30-40	11-19
	38-42	Silty clay, clay	CT. MH. CH	 A-7-6	0	0-2	 95-100	 90-100	 85-100	 80-100	 45-60	20-35
		Silty clay, clay		A-7-6	0	0-5			85-100			
			ĺ	İ	i	i	į	i	i	İ	i	į
295B:												
Mokena		Silt loam	CL, ML	A-4, A-6	0	0			80-95			7-13
	15-31	Loam, silt loam,	CL, ML	A-6	0	0-1	95-100	85-100	75-95	50-80	31-39	11-18
	21 /4	silty clay loam	CI CH MT	 A-7-6	0	0-2	 0E 100	00 100	 85-100	00 100	 4E 60	 20-35
		Silty clay, clay Silty clay, clay		A-7-6 A-7-6	0				85-100	,		20-35
			· ·									

Map symbol	Depth	USDA texture	Classif:	ication	Fragi	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas
and soil name	-			1	>10	3-10	i				limit	ticity
į		İ	Unified	AASHTO	inches	inches	4	10	40	200	İ	index
	In		ļ	ļ	Pct	Pct					Pct	
298B:			 	 		 	 	 		 	 	
Beecher	0-7	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	85-100	29-37	7-15
	7-24	Silty clay loam, silty clay	MH, CH, CL	A-7-6, A-6	0	0	100	95-100	90-100	85-100 	35-55	15-30
	24-36	Silty clay loam	ML, CL	A-6, A-7-6	0	0-1	95-100	85-98	80-95	70-95	33-42	12-20
	36-60	Silty clay loam	CL, ML	A-6	0	0-3	95-100	85-98	80-95	70-95	31-37	10-17
311B:			 	 		 	 	 		 	 	
Ritchey	0-5	Silt loam	ML, CL	A-4, A-6	0	0	95-100	95-100	90-100	70-95	25-40	7-20
- i	5-9	Silt loam, loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	90-100	70-95	20-35	5-15
	9-17	Silty clay loam, clay loam, loam	CL, ML	A-6, A-7-6	0-2	0-5	90-100	85-100	70-100	50-85	30-45	15-25
	17-60	Bedrock										
314A:			 	 		 	 	 		 		
Joliet	0-15	Silt loam	CL	A-6, A-4	0-1	0-5	90-100	80-100	75-95	70-90	25-40	7-20
		1	CL	A-6, A-7-6	0-1	0-5	90-100			55-90		20-35
i		silty clay loam	İ	İ	i	İ	i	İ	İ	İ	İ	İ
	19-60	Bedrock			j		ļ	ļ	ļ	ļ		ļ
315B:			 			 		 		 		
Channahon	0-11	Silt loam	ML, CL	A-4, A-6	0-1	0-5	90-100	80-100	75-95	70-90	20-40	7-20
	11-18	Loam, silt loam,	CL	A-6, A-7-6	0-2	0-10	90-100	80-100	75-95	50-85	30-45	15-25
		clay loam, silty clay loam	 	 		 	 	 	[[
	18-60	Bedrock										
317A:			 	 		 	 	 	 	 		
Millsdale	0-18	Silty clay loam	CL, ML	A-6, A-7-6	0	0	90-100	 85-100	80-100	75-95	30-50	12-25
i		Silty clay, silty		A-7-6	0	0-5					40-60	
		clay loam, clay	j I	 -	į	 	 	i I	j I	 	j i	
	36-60	Bedrock										
318B:			 	 		 	 	 	 	 		
Lorenzo	0-9	Loam	CL, ML	A-6	0	0-5	95-100	90-100	75-90	60-75	25-40	10-20
i	9-18	Loam, clay loam,		A-2-6, A-6,	0	2-10	85-100	50-95	35-85	20-70	30-45	10-25
		gravelly sandy	SM	A-7-6	į	 	i i	 	j I	 	į	
	18-60	Stratified	GP, GP-GM,	 A-1-a	0	5-20	25-80	10-70	5-40	1-15	0-15	NP-5
i		gravelly loamy	SP, SP-SM					ĺ	į	į		ĺ
		sand to		İ	i	İ	i	į	i	İ	İ	į
į		extremely	İ	İ	į	İ	į	İ	İ	İ	İ	İ
i		gravelly coarse	İ	İ	İ	İ	į	İ	İ		İ	İ
i		sand	į	į	i	İ	i	i	i	i	i	İ

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas-
and soil name					>10	3-10	İ				limit	ticity
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct					Pct	
318C2:			 	 		 		 	 	 		
Lorenzo	0-7	Loam	CL, ML	A-6	0	0-5	95-100	90-100	75-90	60-75	25-40	10-20
	7-16	Loam, clay loam,		A-2-6, A-6,	0	2-10	85-100	50-95	35-85	20-70	30-45	10-25
		gravelly sandy	SM	A-7-6	İ	j i	İ	j i	į	 	İ	i i
	16-60	Stratified	GP, GP-GM,	 A-1-a	0	5-20	25-80	10-70	5-40	1-15	0-15	 NP-5
		gravelly loamy	SP, SP-SM			5 25		/	5 10		0 20	
		sand to			i	i	İ	i	i	İ	i	i
		extremely	İ	İ	i	i	į	i	į	į	i	į
		gravelly coarse	İ	j	į	į	į	į	į	j	İ	į
		sand	ļ		İ	İ		İ	İ		İ	İ
320B:			 	 				 		 		
Frankfort	0-8	Silt loam	CL, ML	A-4, A-6	0	0	98-100	95-100	90-100	80-95	25-40	8-20
	8-12	Silty clay loam	CL, ML	A-6, A-7-6	0	0	98-100	95-100	90-100	80-95	25-45	10-25
	12-32	Silty clay, clay	CL, CH, MH	A-7-5, A-7-6	0	0-2	95-100	90-100	85-100	80-95	40-70	20-40
	32-37	Silty clay, clay	CL, ML	A-6, A-7-6	0	0-2	95-100	90-100	85-100	75-95	30-50	15-30
	37-60	Silty clay loam,	CL, ML	A-6, A-7-6	0-1	0-3	95-100	85-100	80-100	70-95	30-50	10-30
		silty clay, clay										
320C2:			 	 				 		 		
Frankfort	0-7	Silty clay loam	CL, ML	A-6, A-7-6	0	0	98-100	95-100	90-100	80-95	25-45	10-25
	7-28	Silty clay, clay	CL, CH, MH	A-7-5, A-7-6	0	0-2	95-100	90-100	85-100	80-95	40-70	20-40
		Silty clay, clay		A-6, A-7-6	0						30-50	
	32-60	Silty clay loam,		A-6, A-7-6	0-1	0-3	95-100	85-100	80-100	70-95	30-50	10-30
		silty clay, clay	 	 		 		 		 		
325B:					İ						İ	
Dresden		Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100				20-40	
	7-16			A-6, A-7-6	0	0	100	80-100	70-100	50-95	30-45	10-25
		clay loam, loam,			!	!		!			!	!
		silt loam										
	16-30	Clay loam,		A-2-6, A-6,	0-1	0-5	60-100	40-100	35-90	30-70	25-45	10-25
		gravelly clay	SM	A-7-6								
		loam, sandy clay	 	 						 		
		loam, very	 	l I					 	 		
	30-60	gravelly loam	GP, GP-GM,	 A-1-a, A-1-b	0-5	5-35	45-90	 15-70	 10-50	 1-20	0-14	 NP
	30-00	gravelly loamy	SP, SP-SM	A-1-0, A-1-D	0-3	3-33	43-90	1 - 2 - 7 0	1 -0 - 50	1-20 	0-14	NF
		sand to	DF, DF-DM	I 		1			1	 	1	
		extremely	1 	1 						 		!
		gravelly	I I	! 	İ	İ		i	İ	l I	Ì	
		coarse sand	İ		İ	i	İ	i	i		1	
			İ	İ	i	i		i	<u> </u>	İ	i	<u> </u>

Map symbol	Depth	USDA texture	Classif	ication	i	ments		rcentage sieve n	_	ng	 Liquid	1
and soil name					>10	3-10		1	1 40	1 000	limit	
			Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct				 	Pct	
325C2:		 	 	l I		 	l I	 	 	l I	1	
Dresden	0-9	Silt loam	CL, CL-ML, ML	A-4. A-6	0	0	100	95-100	90-100	 70-98	20-40	5-15
		1		A-6, A-7-6	0	0	1				30-45	1
		clay loam, loam,	İ	İ	i	i	İ	İ	İ	İ	i	i
j		silt loam		ĺ	İ	İ	ĺ	ĺ	ĺ	ĺ	j	ĺ
	15-32	Clay loam,	CL, ML, SC,	A-2-6, A-6,	0-1	0-5	60-100	40-100	35-90	30-70	25-45	10-25
		gravelly clay	SM	A-7-6								
		loam, loam, very			!	!			!		!	
		gravelly loam										
	32-60	Stratified gravelly loamy	GP, GP-GM, SP, SP-SM	A-1-a, A-1-b	0-5	5-35	45-90	15-70	10-50	1-20	0-14	NP
		sand to	SP, SP-SM	 		 	 	 	 	 		
		extremely	İ	İ	i	İ	! 		<u> </u>	! 	1	
		gravelly	İ	İ	i	İ	İ	İ	İ	İ	i	i
j		coarse sand	ĺ	ĺ	ĺ	İ	ĺ	ĺ	ĺ	ĺ	İ	ĺ
327B:												
Fox		Silt loam	CL, CL-ML, ML		0	0	1	95-100				3-15
	4-7 7-12	Silt loam Silty clay loam,	CL, CL-ML, ML	A-4, A-6 A-6, A-7-6	0	0 0-1		95-100			25-50	3-15
	7-13	silt loam	CH, MH	A-0, A-7-0 	0	0-1	33-100	83-100	/3-100 	70-33 	23-30	10-25
	13-28	1	CL, ML, SC,	A-2-6, A-6,	0-1	0-5	65-100	50-100	35-95	30-80	25-45	10-25
		clay loam,	SM	A-7-6	i	i	İ	İ	İ	İ	i	İ
j		gravelly loam	ĺ	ĺ	ĺ	İ	ĺ	ĺ	ĺ	ĺ	İ	ĺ
	28-60	Stratified		A-1-a, A-1-b,	0-3	0-10	30-100	15-85	10-70	2-10	0-14	NP
		gravelly sand	SP, SP-SM	A-3	!	!			!		!	
		to extremely										
		gravelly coarse sand	l I	l I		 	 	 	l I	 		
		Coarse sand	 	 	 	 	 	 	l I	l I		
327C2:			İ	İ	i	i	İ	İ	i	İ	i	i
Fox	0 - 4	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	85-98	70-95	15-30	3-15
	4-12	Silty clay loam,	CL, ML	A-6, A-7-6	0	0-1	95-100	85-100	75-100	70-95	25-50	10-25
		silt loam										
	12-24	Clay loam, sandy		A-2-6, A-6,	0-1	0-5	65-100	50-100	35-95	30-80	25-45	10-25
		clay loam,	SM	A-7-6						 		
	24-60	gravelly loam	GP, GP-GM,	 A-1-a, A-1-b,	 0-3	 0-10	 30-100	 15-25	 10-70	2-10	0-14	 NP
	24-00	gravelly sand	SP, SP-SM	A-3	0-3	0-10			=0=70	2-10	0-14	142
		to extremely			i	i	! 	 	i	! 	1	
		gravelly	İ	İ	i	i	j	į	į	į	i	i
j		coarse sand	İ	İ	İ	İ	İ	İ	İ	İ	İ	İ

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	i	ments		rcentago sieve n	e passi: umber	ng	 Liquid	1
and soil name			Unified	AASHTO	>10 inches	3-10	 4	10	40	200	limit 	ticity index
	In			<u> </u>	Pct	Pct					Pct	
327D2:				 	 		 	 		 		
Fox	0-8	Loam	CL, CL-ML, ML	 A-4, A-6	0	0	 95-100	 95-100	 85-98	 60-80	15-30	3-15
		Clay loam, sandy		A-2-6, A-6,	0-1	0-5			35-95			10-25
		clay loam,	SM	A-7-6	İ	İ	İ	İ	İ	İ	İ	i
		gravelly loam	ĺ	ĺ	ĺ	İ	ĺ	ĺ	İ	ĺ	İ	İ
j	28-60	Stratified	GP, GP-GM,	A-1-a, A-1-b,	0-3	0-10	30-100	15-85	10-70	2-10	0-14	NP
		gravelly sand	SP, SP-SM	A-3								
		to extremely										
		gravelly										
		coarse sand										
330A:				 								
Peotone	0-13	Silty clay loam	CL, CH, MH	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	40-65	15-35
	13-50	Silty clay loam,	CL, CH, MH	A-7-6, A-7-5	0	0-3	98-100	95-100	90-100	85-100	40-70	15-40
		silty clay										
	50-60	Silty clay loam,		A-6, A-7-6,	0	0-5	95-100	95-100	90-100	75-100	30-60	15-30
		silt loam, silty		A-7-5								
		clay	 	 	 	 	 	 	 	 	 	
344A:					İ	İ		İ	İ		İ	
Harvard	0-9	Silt loam	CL, ML	A-4, A-6	0	0			90-100			8-15
	9-36	Silty clay loam,	CL, ML	A-6, A-4, A-	0	0	100	95-100	90-100	85-100	30-45	10-25
		silt loam	!	7-6		!			!		!	
	36-56			A-4, A-6, A-	0	0-3	95-100	85-100	75-90	40-85	25-45	5-25
		loam, sandy loam		7-6								
	56-60	!	SC-SM, CL-ML,		0	0-5	90-100	80-98	40-90	15-70	20-35	5-15
		to clay loam	CL, SC	2-4, A-2-6 	 	 	 	 	 	 	 	
344B:			İ	İ	İ	İ	İ	İ	İ	İ	İ	
Harvard	0-9	Silt loam	CL, ML	A-4, A-6	0	0	100		90-100			8-15
	9-30	Silty clay loam,	ML, CL	A-6, A-4, A-	0	0	100	95-100	90-100	85-100	30-45	10-25
		silt loam		7-6								
	30-56			A-4, A-6, A-	0	0-3	95-100	85-100	75-90	40-85	25-45	5-25
	F.C. CO	loam, sandy loam	1	7-6								
	56-69	!	CL-ML, SC-SM,	A-4, A-6, A- 2-4, A-2-6	0	0-5	90-100	80-98	40-90	15-70	20-35	5-15
		to clay loam	CL, SC	2-4, A-2-6 	 	 	 	 	 	 	 	
344C2:					İ	İ		İ	İ		İ	
Harvard	0-7	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	90-100	85-100	30-40	8-15
	7-32	Silty clay loam,	CL, ML	A-6, A-7-6,	0	0	100	95-100	90-100	85-100	35-45	10-20
		silt loam		A-4					[
	32-40	Clay loam, silt	CL, ML, SM,	A-4, A-6, A-	0	0-3	95-100	85-100	75-90	40-85	30-45	5-20
		loam, sandy loam		7 - 6								
	40-60	1		A-4, A-6, A-	0	0-5	90-100	80-98	40-90	15-70	20-40	NP-20
		to clay loam	CL-ML, SC	2-4, A-2-6								
		1				1			1		1	

Map symbol	 Depth	USDA texture	Classi	fication	Frag	ments		rcentag sieve n	_	_	 Liguid	 Plas
and soil name				1	>10	3-10					limit	
		<u> </u>	Unified	AASHTO	inches	inches	4	10	40	200	İ	index
	In				Pct	Pct					Pct	
356A:			 	 	l I			 	 	 	 	
Elpaso	0-21	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	95-100	90-100	35-50	15-30
	21-44 	Silty clay loam, silt loam	CL, ML 	A-6, A-7-6 	0	0 	100 	100 	95-100 	90-100 	30-50	15-30
	44-69 	Clay loam, silt loam, silty clay loam	CL, ML 	A-6, A-7-6 	0	0 	100 	85-100 	80-100 	70-100 	25-45 	10-25
	69-80	Clay loam, silt loam, silty clay loam	1	A-6 	0 	0-5	95-100 	85-100 	 75-100 	 70-98 	20-35	 10-20
375A:			 								 	
Rutland	0-14	Silty clay loam	ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	30-40	10-20
	14-36 	Silty clay, silty clay loam	CH, CL, MH,	A-6, A-7-6 	0	0 	100 	100 	95-100 	90-100 	35-55 	15-35
	36-44 	Silt loam, silty clay loam	ML, CL 	A-6, A-7-6 	0	0 	100 	100 	95-100 	85-100 	30-50 	15-30
	44-52	Silty clay, clay	CH, CL, MH	A-7-6	0	0	98-100	95-100	90-100	85-100	45-65	25-40
	52-60	Clay, silty clay	CH, CL, MH	A-7-6, A-6	0	0-3	95-100	90-100	90-100	85-100	40-60	20-35
375B:									İ		! 	
Rutland	0-13	Silty clay loam	CL, ML	A-6, A-4	0	0	100	100	95-100	90-100	30-40	10-20
	13-40	Silty clay, silty clay loam	CL, CH, MH,	A-6, A-7-6 	0	0 	100 	100 	95-100 	90-100 	35-55 	15-35
		Silty clay, clay		A-7-6	0	0	1			85-100		
	50-60 	Silty clay, clay clay	CH, CL, MH	A-7-6, A-6 	0	0-3	95-100 	90-100	90-100	85-100	40-60 	20-35
375B2:												
Rutland	0-9	Silty clay loam	CL, ML	A-6, A-4	0	0	100	100	95-100	90-100	30-40	10-20
	9-37 	Silty clay loam, silty clay	CL, MH, ML,	A-6, A-7-6 	0	0 	100 	100 	95-100 	90-100 	35-55 	15-35
	37-46	Silty clay, clay	MH, CL, CH	A-7-6	0	0	98-100	95-100	90-100	85-100	45-65	25-40
	46-80	Silty clay, clay	MH, CL, CH	A-7-6, A-6	0	0-3	95-100	90-100	90-100	85-100	40-60	20-35
388B:												
Wenona	0-14	Silt loam	CL, ML	A-6	0	0	100	100	95-100	90-100	30-39	11-18
	14-37 	Silty clay loam, silty clay	CH, CL 	A-7-6	0	0	100	100	95-100 	90-100	44-50 	22-27
	37-50	Silty clay, clay	CL, MH, CH	A-7-6	0	0	98-100	95-100	90-100	85-100	48-66	25-39
	50-60	Silty clay, clay	CL, CH	A-7-6	0	0-3	95-100	90-100	90-100	85-98		!
		1	i .	1	1	1	1	1	1			1

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments		rcentag sieve n	_	ng	 Liquid	 Plas-
and soil name				I	>10	3-10	<u></u>				limit	. –
			Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct					Pct	
388B2:				 	l I	l I	 	 	 			l I
Wenona	0-9	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-36	11-16
	9-42	Silty clay loam,	CL, CH	A-7-6	0	0	100	100	95-100	90-100	44-50	22-27
j		silty clay	İ	İ	j	į	į	j	į	į	į	İ
	42-52	Silty clay, clay	CH, CL, MH	A-7-6	0	0	98-100	95-100	90-100	85-100	48-66	25-39
	52-60	Silty clay, clay	CH, CL	A-7-6	0	0-3	95-100	90-100	90-100	85-98	48-53	25-29
388C2:				 				l I	 	 	1	
Wenona	0-6	Silty clay loam	ML, CL	A-7-6, A-6	0	0	100	100	95-100	90-100	30-47	11-24
	6-45	Silty clay loam,	CH, CL	A-7-6	0	0	100	100	95-100	90-100	44-50	22-27
j		silty clay	İ	İ		İ			İ	İ		ĺ
		Silty clay, clay	1	A-7-6	0	0				1	48-66	
	54-60	Silty clay, clay	CL, CH	A-7-6	0	0-3	95-100	90-100	90-100	85-98	48-53	25-29
397F:				 		 	 	 	 		 	
Boone	0-6	Loamy fine sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	90-100	65-90	5-30	0-14	NP
j	6-15	Loamy fine sand,	SM, SW-SM,	A-2-4, A-3	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
		fine sand	SC-SM									
	15-23	Fine sand, sand	SP-SM, SW-SM,	A-3, A-2-4 	0	0	100	95-100 	73-83 	0-13	8-15 	NP-2
İ	23-60	Bedrock		i			i	i				i
413B:				 								
Gale	0-4	Silt loam	CL, ML	A-4, A-6	0	0	100	100	90-100	85-95	26-36	8-16
	4-7	Silt loam	ML, CL, CL-ML		0	0	100	100	90-100	85-95	23-36	6-16
	7-30	Silt loam, silty	CL, ML	A-6, A-7-6	0	0	100	100	90-100	85-95	30-43	11-21
		clay loam										
	30-37	Loamy fine sand,	SC-SM, SM	A-4, A-2-4,	0	0-3	90-100	85-100	45-75	5-40	14-25	NP-7
	27 60	loam Bedrock		A-1-b		 	 				 	
	37-60	Bedrock										
413C2:				İ	İ	İ	İ	İ	İ		İ	İ
Gale	0 - 6	Silt loam	ML, CL	A-4, A-6	0	0	100	100	90-100	85-95	26-36	8-16
	6-9	Silt loam	CL-ML, CL, ML		0	0	100	100	90-100	1	23-36	6-16
	9-31	Silt loam, silty clay loam	ML, CL	A-6, A-7-6	0	0	100	100	90-100	85-95	30-43	11-21
	31_38	Loamy fine sand,	SC-SM SM	 A-4, A-2-4,	1 0	0-3	90-100	 85-100	 45-75	 5-50	 14-25	 NP-7
	31 30	loam		A-1-b		0 3			13 ,3	3 30	11 23	
j	38-60	Bedrock	i	i	i	i	i	i	i		i	i
1055												
435A: Streator	0_13	 Silty clay loam	 ML, CL	 A-6, A-7-6	0	 0	100	 100	 05 - 100	 90-100	36-49	 16-25
Priegrot		Silty clay loam		A-6, A-7-6	0	0	100	100		90-100		22-29
	13 12	clay loam									-1 33	
	42-68	Clay, silty clay	CL, MH, CH	A-7-6	0	0	98-100	95-100	90-100	85-98	48-66	25-39
j	68-80	Silty clay, clay	MH, CL, CH	A-7-6	0	0-3	95-100	90-100	90-100	85-98	48-66	25-39
					1		1	1			1	

			Classif	fication	Frag	ments	Pe	rcentag	e passi	ng		
Map symbol	Depth	USDA texture			.			sieve n	umber		Liquid	
and soil name					>10	3-10			1		limit	ticity
		<u> </u>	Unified	AASHTO		inches	4	10	40	200		index
	In				Pct	Pct					Pct	
448B:			l I					 				
Mona	 0_11	 Silt loam	CL, ML	 A-4, A-6, A-	0	0	100	 05_100	95-100	 05_100	25-45	8-25
MOIIa	0-11	SIIC IOAM	CL, ML	7-6	0	0	100	 	93-100	 	25-45	6-25
	11-39	Clay loam, silty	CL, SM, SC,	A-6, A-7-6	0	0-5	95-100	 85-100	75-90	40-85	35-50	11-25
		clay loam, sandy		İ	i	i	i	İ	i	i	i	i
	İ	clay loam	İ	İ	İ	i	į	į	į	į	i	į
	39-44	Silty clay, clay	ML, MH, CH,	A-7-6, A-6	0-1	0-5	95-100	85-95	80-95	75-95	40-60	15-35
			CL		İ	İ	İ	ĺ	İ	İ	İ	İ
	44-60	Silty clay,	ML, MH, CH,	A-7-6, A-6	0-1	0-5	95-100	85-95	80-95	75-95	40-60	15-35
		clay	CL									
448C2:												
Mona	0-7	Silt loam	CL, ML	A-4, A-6, A-	0	0	100	95-100	95-100	85-100	25-45	8-25
	=			7-6								
	7-33	Clay loam, silty clay loam, sandy		A-6, A-7-6	0	0-5	95-100	85-100	75-90	40-85	35-50	11-25
		clay loam, sandy	 			 		 	 			
	 33_37	Silty clay, clay	∣ ∣сн ст. мн	 A-7-6, A-6	0-1	0-5	 95_100	 85_95	 80-95	 75-95	40-60	 15_35
	33-37	cray cray, cray	ML	A-7-0, A-0	0-1	0-5	55-100	03-33 		75-55	10-00	13-33
	37-60	Silty clay, clay	1	A-7-6, A-6	0-1	0-5	95-100	85-95	80-95	75-95	40-60	15-35
			ML		i							
	İ	İ	İ	İ	İ	į	į	į	į	į	į	į
512B:												
Danabrook		!	CL	A-4, A-6	0	0	100		90-100			5-20
	13-33	1	CL	A-6, A-7-6	0	0	100	98-100	90-100	85-100	30-45	10-25
		silt loam										
	33-50		CL	A-6, A-7-6	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
		sandy clay loam			0	0-3						 5-15
	50-60	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98 	65-90	40-70	20-40	5-15
512C2:	l I		 			 	 	 	 	 	 	
Danabrook	 0-8	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	 85-100	25-40	5-20
		1	CL	A-6, A-7-6	0	0	100		90-100			10-25
		silt loam	İ	İ	i	i	i	İ	i	i	i	i
	27-40	Clay loam, loam,	CL	A-6, A-7-6	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
		sandy clay loam	ĺ		İ	İ	İ	ĺ	İ	İ	İ	İ
	40-65	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15
516A:		!	ļ.					ļ				[
Faxon		Loam	CL	A-6, A-4	0	0			80-95			9-16
		1	CL	A-7-6, A-6	0	0-5			70-97		1	
	36-60	Bedrock										

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	 Depth	USDA texture	Classif	ication	Frag	ments	,	rcentag sieve n	e passi: umber	ng	 Liquid	 Plas
and soil name					>10	3-10			1 40	1 000	limit	
	 -	1	Unified	AASHTO		inches	4	10	40	200		index
	In		 	 	Pct	Pct	 	 	 	 	Pct	
527C2:								<u> </u>			İ	
Kidami	0-9	Loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	80-95	60-85	20-35	5-15
	9-30	Loam, clay loam	CL	A-6, A-7-6	0	0-2	95-100	85-98	75-95	55-75	25-45	10-25
	30-40			A-4, A-6	0	0-2	90-100				25-35	8-15
	40-60	Loam, sandy loam	'	A-4, A-6	0	0-3	90-100	80-95	65-90	40-65	15-30	3-15
			ML, SC, SC-									
	 		SM	l I		 		 		 	l I	
527D2:	 		 	 		 		 	 	 	l I	
Kidami	0-10	Loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	80-95	60-85	20-35	5-15
	10-27	Loam, clay loam	CL	A-6, A-7-6	0	0-2	95-100	85-98	75-95	55-75	25-45	10-25
	27-35	Loam	CL	A-4, A-6	0	0-2	90-100	80-98	70-90	55-70	25-35	8-15
	35-60	Loam, sandy loam		A-4, A-6	0	0-3	90-100	80-95	65-90	40-65	15-30	3-15
			ML, SC, SC-			!		!	!		ļ	
			SM									
530B:	l I		 	 	l	 	 	 	 	 	1	
Ozaukee	0-4	Silt loam	ML, CL	A-4, A-6	0	0-1	98-100	98-100	90-100	85-95	25-35	7-15
	4-10	Silt loam	ML, CL-ML, CL		0	0-2	95-100	95-100	90-100	85-95	20-35	5-15
	10-21	Silty clay loam,	MH, CL, CH	A-7-6	0-1	0-3	95-100	90-98	85-95	85-95	45-65	25-40
		clay, silty clay	,									
	21-39	Silty clay loam,	CL, CH	A-6, A-7-6	0-1	0-5	90-98	85-98	80-95	75-95	35-55	20-35
		silty clay	 CL			0-5	 90-98				35-45	
	39-60	Silty clay loam, clay loam	CL	A-6, A-7-6	0-1	0-5	90-98	80-95	/5-95 	70-90 	35-45	15-25
	 	Clay IOam	 	 	l I	 	 	 	 	 	l I	
530C2:					İ	İ	İ	İ	İ	İ	İ	İ
Ozaukee	0-6	Silt loam	ML, CL	A-4, A-6	0	0-1	98-100	98-100	90-100	85-95	25-35	7-15
	6-21	Silty clay loam,		A-7-6	0-1	0-3	95-100	90-98	85-95	85-95	45-65	25-40
		clay, silty clay	•									
	21-28	Silty clay loam,	CH, CL	A-6, A-7-6	0-1	0-5	90-98	85-98	80-95	75-95	35-55	20-35
	 20_60	silty clay Silty clay loam,	 CL	 A-6, A-7-6	0-1	0-5	 an_ae	 00_05	 75_95	 70_90	35-45	 15-25
	20-00	clay loam		A-0, A-7-0	0-1	0-3	30-36	80-95	/ 3 - 3 3	70-30 		13-23
	i				i	i	İ	i	i	İ	İ	!
530C3:		İ	İ	İ	j	İ	İ	İ	İ	İ	İ	
Ozaukee				A-6, A-7-6	0	1		1			35-50	
	9-21			A-7-6	0-1	0-3	95-100	90-98	85-95	85-95	45-65	25-40
		clay, silty clay	,									
	21-27		CH, CL	A-6, A-7-6	0-1	0-5	90-98	85-98	80-95	75 - 95	35-55	20-35
	 27-60	silty clay Silty clay loam,	 CL	 A-6, A-7-6	0-1	0-5	 90-98	 80-95	 75 - 95	70-90	35-45	 15_25
	27-00	clay loam			0-1	0-5			, 5 - 55 	, 0 = 50 	122-42	
	i		İ	i i	i	i	i	i	i	İ	i	İ

				Cl	assif:	icatio	n	Fragi	nents		rcentage	_	ng	 	
Map symbol and soil name	Depth	USDA texture							3-10	:	sieve n	umber		Liquid	
and soll name		l I	 1	Unifi	ed	 AA	SHTO	>10	3-10 inches	 4	10	40	200	limit	index
	In	<u> </u>						Pct	Pct	<u> </u>				Pct	
530D2:		 	 			 				 	 		 		
Ozaukee	0-6	Silt loam	ML,	CL		A-4,	A-6	0	0-1	98-100	98-100	90-100	85-95	25-35	7-15
	6-20	Silty clay loam, clay, silty clay		CL,	MH	 A-7-6 		0-1	0-3	95-100	90-98	85-95	85-95	45-65	25-40
	20-28	Silty clay loam, silty clay	CH,	CL		A-6,	A-7-6	0-1	0-5	90-98	85-98	80-95	75-95	35-55	20-35
	28-60	Silty clay loam,	CL			A-6,	A-7-6	0-1	0-5	90-98	80-95	75-95	70-90	35-45	15-25
530D3:			 			 			 	 	 	 	 	 	
Ozaukee	0 - 9	Silty clay loam	CL,	ML		A-6,	A-7-6	0	0-1	90-98	85-98	85-95	80-95	35-50	15-25
	9-21	Silty clay loam, clay, silty clay		CH,	MH	A-7-6 		0-1 	0-3	95-100 	90-98 	85-95 	85-95 	45-65	25-40
	21-25	Silty clay loam, silty clay	CL,	CH		A-6,	A-7-6	0-1 	0-5	90-98 	85-98 	80-95 	75-95 	35-55 	20-35
	25-60	Silty clay loam, clay loam	CL			A-6,	A-7-6	0-1	0-5	90-98	80-95	75-95	70-90	35-45	15-25
530E2:		 	 			 				 	 		 		
Ozaukee	0-6	Silt loam	ML,	CL		A-4,	A-6	0	0-1	98-100	98-100	90-100	85-95	25-35	7-15
	6-27	Silty clay loam, clay, silty clay		CH,	MH	A-7-6 		0-1 	0-3	95-100 	90-98 	85-95 	85-95 	45-65	25-40
	27-31	Silty clay loam, silty clay	CH,	CL		A-6, 	A-7-6	0-1 	0-5 	90-98 	85-98 	80-95 	75-95 	35-55 	20-35
	31-60	Silty clay loam, clay loam	CL			A-6,	A-7-6	0-1	0-5	90-98	80-95	75-95	70-90	35-45	15-25
530F:		 	 			 				 	 	 	 	 	
Ozaukee	0-5	Silt loam	CL,	ML		A-4,	A-6	0	0-1	98-100	98-100	90-100	85-95	25-35	7-15
	5-29	Silty clay loam, clay, silty clay		CH,	MH	A-7-6 		0-1	0-3	95-100 	90-98 	85-95 	85-95 	45-65	25-40
	29-36	Silty clay loam, silty clay	CH,	CL		A-6,	A-7-6	0-1	0-5	90-98	85-98 	80-95	75-95	35-55	20-35
	36-60	Silty clay loam, clay loam	CL			A-6,	A-7-6	0-1	0-5	90-98	80-95	75-95	70-90	35-45	15-25
541B:		 	 			 				 	 		 		
Graymont	0-12	Silt loam	ML,	CL,	CL-ML	A-4,	A-6	0	0	100	100	95-100	90-100	25-40	5-20
	12-33	Silty clay loam, silt loam	CL, 	ML		A-6, 	A-7-6	0 	0 	100 	100 	95-100 	90-100 	30-50 	10-25
	33-38	Silty clay loam, silt loam	CH,		ML,	A-6,	A-7-6	0	0-5	90-100 	85-99 	80-95 	80-90	30-55 	10-30
	38-60	Silty clay loam,	ML,	CL		A-4,	A-6, A-	0	0-5	90-100	80-98	80-95	80-90	25-50	8-25

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	i	ments	1	rcentag sieve n	e passi: umber	ng	 Liquid	
and soil name			Unified	AASHTO	>10	3-10	4	10	40	200	limit	ticity index
	In	<u> </u>	Unified	AASHTO	Pct	Pct	4	10 	40	200	Pct	Index
541B2:												
Graymont	0 - 8	 Silt loam 	 ML, CL 	 A-4, A-6, A- 7-5	0	0	100	 100 	 95-100 	 90-100 	 28-47 	 6-17
ļ	8-24	Silty clay loam, silt loam	MH, ML, CL	A-4, A-7-5, A-6	0	0	100	100	95-100	90-100	33-58	8-27
	24-35		MH, ML, CL	A-4, A-6, A-	0	0-5	90-100	85-99	80-95	80-90	30-55	9-27
	35-60		CL, ML	A-4, A-6, A- 7-6	0	0-5	90-100	 80-98 	80-95	 80-90 	25-50	9-25
541C2:			 					 	 	 	 	
Graymont	0 - 9	Silt loam	ML, CL-ML, CL		0	0	100	100		90-100		5-20
	9-30	Silty clay loam, silt loam	ML, CL 	A-6, A-7-6 	0	0	100	100 	95-100	90-100 	30-50	10-25
ļ	30-38	Silty clay loam, silt loam	CH, MH, CL,	A-6, A-7-6	0 	0-5	90-100	85-99 	80-95 	80-90 	30-55	10-30
	38-60		ML, CL	A-4, A-6, A- 7-6	0	0-5	90-100	80-98 	80-95	80-90	25-50	8-25
542A:			 			 		 	 	 	 	
Rooks	0-15	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-100	37-43	16-21
	15-30	Silty clay loam, silty clay	CL, ML, MH,	A-6, A-7-6	0	0	100	100 	95-100	90-100	37-53	16-29
ļ	30-45	Silt loam, silty clay loam	ML, CL-ML, CL	A-4, A-6	0	0	100	95-100	95-100	85-95	21-39	4-18
	45-60	Silty clay loam,	CH, ML, MH,	A-6, A-7-6	0	0-5	95-100	90-95	85-95	80-95	37-53	16-29
542B:								 				
Rooks		Silty clay loam		A-6, A-7-6	0	0	100	100			37-43	1
	10-28	Silty clay loam, silty clay	ML, MH, CH,	A-6, A-7-6 	0	0	100 	100 	95-100	90-100	37-53 	16-29
	28-49	Silty clay loam, silt loam	CL, CL-ML, ML	A-4, A-6 	0	0	100	95-100 	95-100	85-95 	21-39	4-18
ļ	49-60	Silty clay loam, silty clay	CL, CH, ML,	A-6, A-7-6	0	0-5	95-100	90-95	85-95	80-95	37-53 	16-29
549B:			 				 	 	l I	 	 	
Marseilles	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-37	11-16
ļ	5-9	Silt loam, silty clay loam	ML, CL	A-6, A-4	0	0 	100	100 	95-100 	90-100	26-37	8-16
ļ	9-28		CL, ML	A-6, A-7-6	0	0	100	100	90-100	85-100	34-44	14-22
	28-40	Silty clay loam, silty clay, clay		A-7-6, A-6	0-1	0-5	95-100	90-100	85-100	 80-95 	 37-50 	16-27
	40-60	loam Bedrock	 					 	 	 	 	

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments	,	rcentag sieve n	_	ng	 Liquid	 Plas
and soil name	Depen	ODDIT CONCUTO	 	ī	>10	3-10	 	51010 11	unio C I		limit	
and soll name			 Unified	AASHTO	1	inches	4	10	40	200		index
	Tn	1	1	1	Pot	Pot	 I	1	1	1	Pct	
	111	1	 	 	FCC	FCC	l I	 	 	l I	FCC	l I
549C2:			 	 	l l	1	l I	l I	 	l I	 	l I
Marseilles	0-5	Silt loam	CL, CL-ML, ML	 A _ 4	0	0	100	100	 95_100	 90-100	25_40	 5-15
maisellles		Silty clay loam,		A-4, A-0 A-6, A-7-6	0 0	0	100	100		85-100		15-25
	3-10	silt loam	ML, CL	A-0, A-7-0	"	"	1 100	1 100	30 - 1 00	03-100	33-30	13-23
	16-26	Silty clay loam,	∣ мт. сн. ст.	 A-7-6, A-6,	0-5	0-20	 90_100	 90_100	 85_100	 70_100	40-60	 15_30
	10-20	clay loam, silty		A-7-5	0-3	0-20	30-100 	30 - 1 00	03-100 	70-100 	10-00	13-30
		clay roam, sirty	1	A-7-5	 		 	 	 	 	 	l I
	26-60	Bedrock	 		 		 	 	 	 		
	20-00	Dedicor	 	 	 		 	 	 	 		
549D2:			 	 	 	 	 	 	İ	 	 	
Marseilles	0-5	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	 95-100	 85-100	25-40	5-15
Marberreb		Clay loam, silty		A-7-6, A-7-5,	1	0-5					40-60	
	3 2,	clay, silty clay		A-6	0 1	0 5	33 100	30 100	03 100	00) 3	1	1
		loam	l I	0	İ	İ	 	 	 	 	İ	
	27-60	Bedrock	! 							 		
				İ	İ	İ	! 			! 		
549F:				İ	İ	i		İ	i	! 	i	İ
Marseilles	0-10	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-15
i	10-35	Silty clay loam,	CL, CH	A-7-6, A-7-5,	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
i		silty clay, clay		A-6	İ	İ	İ	İ	İ	İ	i	İ
i		loam	İ	İ	İ	İ	İ	İ	İ	İ	i	İ
i	35-60	Bedrock	i	i					i	i		i
i				İ	İ	İ	İ	İ	İ	İ	i	İ
549G:		İ	İ	İ	İ	İ	İ	į	i	İ	i	į
Marseilles	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-15
j	10-35	Clay loam, silty	CH, CL	A-7-6, A-7-5,	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
į		clay, silty clay	İ	A-6	İ	İ	İ	į	İ	İ	į	İ
j		loam	ĺ	ĺ	Ì	İ	ĺ	ĺ	İ	ĺ	İ	ĺ
j	35-60	Bedrock										
j					ĺ	İ	ĺ	ĺ	ĺ	ĺ	İ	ĺ
554B:												
Kernan	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-37	11-16
	5-12	Silt loam	ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	26-37	8-16
	12-36	Silty clay loam,	CL, CH	A-7-6	0	0	100	100	95-100	90-100	44-53	22-29
		silty clay										
İ	36-43	Silty clay loam,	MH, CL, CH	A-7-6	0	0	98-100	95-100	90-100	85-100	44-71	22-43
j		silty clay, clay										
j	43-60	Silty clay, clay	CL, CH, MH	A-7-6	0	0-3	95-100	90-100	90-100	85-100	48-71	25-43
į			1					1	I			

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments	,	rcentag sieve n	e passi: umber	ng	 Liquid	 Plas
and soil name					>10	3-10					limit	
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct					Pct	
560D2:			 	 				İ		 	i i	
St. Clair	0-5	Silty clay loam	CL, ML	A-6, A-7-6, A-4	0	0-1	95-100	95-100	90-100	80-98 	30-45	10-30
	5-8	Silty clay loam	CL, ML	A-6, A-7-6	0	0-1	95-100	95-100	90-100	80-98	30-45	10-30
	8-22	Silty clay, clay	CL, CH, MH	A-7-5, A-7-6, A-6	0 	0-2	95-100 	90-100 	85-100 	80-98 	40-70 	20-40
		Silty clay, clay		A-6, A-7-6	0	0-2	1				30-50	1
	37-65	Silty clay loam,		A-6, A-7-6,	0-1	0-3	90-100	80-98	75-97	70-95	30-50	10-30
		silty clay, clay	 	A-4				 		 	 	
560E:								İ			İ	<u> </u>
St. Clair	0-5	Silty clay loam	CL, ML	A-6, A-7-6, A-4	0	0-1	95-100	95-100	90-100	80-98 	30-45	10-30
	5-12	Silty clay, clay	j	A-7-5, A-7-6, A-6	į	İ	į	į	į	İ	40-70 	į
		Silty clay, clay	1 -	A-6, A-7-6	0		1				30-50	1
	26-60	Silty clay loam,	1 -	A-6, A-4, A-	0-1	0-3	90-100	80-98	75-97	70-95	30-50	10-30
		silty clay, clay	 	7-6 	 	l	 	 	 	 	 	
567B:						İ		İ			İ	
Elkhart	0-13	Silt loam	CL, ML, CL-ML	A-4, A-6	0	0	100	100	97-100	95-100	24-37	5-15
		Silty clay loam, silt loam	İ	A-7-6, A-6 	0 	0	100 	100 	İ	İ	37-46 	16-24
		Silt loam, silty clay loam	İ	A-6, A-4 	0 	0	100 	100 	İ	95-100 	į	7-17
	52-60	Silt loam	CL, ML	A-6, A-4	0	0	100	100	97-100	95-100	24-37	7-18
572A:				 	 	İ		 		 	 	
Loran	0-14	Silt loam	ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	30-40	6-15
	14-39	Silty clay loam, silt loam, loam	ML, CL 	A-6, A-7-6 	0 	0	100 	95-100 	95-100 	80-100 	35-50 	15-25
	39-53	Silty clay, clay, channery clay	CL, ML 	A-6, A-7-6 	0 	0-5	95-100 	95-100 	90-100 	80-100 	30-50 	15-35
	53-60	Bedrock										
572B:		1	 	 	 	l	 	 	 	 	 	
Loran	0-12	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	30-40	6-15
j	12-43	Silty clay loam,	CL, ML	A-6, A-7-6	0	0	100	95-100	95-100	80-100	35-50	15-25
		silt loam, loam	[[[
	43-51	Channery clay, channery silty	CL, ML 	A-6, A-7-6 	0-15	0-10	95-100	95-100 	90-100	80-100 	30-50	15-35
	51-60	clay, clay Bedrock	 	l 	 	 		 		 	 	
			İ	İ	i	İ		İ	i		İ	i

Map symbol	Depth	USDA texture	Classif:	ication	Fragi	ments		rcentago sieve no	-	ng	 Liquid	 Plas
and soil name					>10	3-10					limit	
j		İ	Unified	AASHTO	inches	inches	4	10	40	200	į	index
	In	1	1	1	Pct	Pct			1		Pct	
572C2:												
Loran	0-9	Silt loam	ML, CL	A-7-6, A-6	0	0	100			90-100		
ļ	9-41		CL, ML	A-6, A-7-6	0	0	100	95-100	95-100	80-100	35-50	15-25
l I	41-60	silt loam, loam Channery clay,	CL, ML	 A-6, A-7-6	0	 0-5	 95_100	 95-100	 90_100	 80_100	 30-50	15-31
	11 00	channery silty				0 3			50 100			
İ		clay, clay			İ	İ	İ	İ	İ	i	İ	İ
j		·	j	j	İ	į	į	į	į	į	į	į
514A:												
Chenoa				A-7-6	0	0	100			93-100		1
	12-32		CL, CH, MH	A-7-6	0	0	100	100	97-100	93-100	45-52	22-28
ļ	20.26	silty clay										
	32-36	Silty clay loam, silt loam	CL, ML	A-7-6, A-6	0	0-1	95-100	85-98	80-95 	/0-95 	33-43	12-20
	36-60	Silt loam Silty clay loam,	MT. CT.	 A-6	0	0-3	 95-100	 85-98	 80-95	 70-95	 33-39	 12-15
i		silt loam										
İ					i	İ	İ	İ	İ	i	İ	i
514B:			ĺ	ĺ	İ	ĺ	ĺ		ĺ	ĺ	ĺ	İ
Chenoa		Silty clay loam	CL, ML	A-7-6	0	0	100	100		93-100		
	15-28	Silty clay loam,	CH, MH, CL	A-7-6	0	0	100	100	97-100	93-100	45-52	22-28
	20 47	silty clay	NT OT				 05 100					112 20
l I	28-4/	Silty clay loam, silt loam	мь, сь	A-7-6, A-6	0	0-1	 95-100	85-98	80-95 	/U-95 	33-43	12-20
	47-60	Silty clay loam,	ML, CL	 A-6	0	0-3	 95-100	 85-98	 80-95	 70-95	 33-39	12-1
ľ		silt loam				İ						
j		İ	j	j	j	į	į	į	į	į	į	į
662B:												
Barony		Silt loam	CL	A-4, A-6	0	0		98-100		1	1	
	8-34		CL	A-6, A-7-6	0	0	100	95-100	95-100	85-100	25-45	11-25
	24 54	silt loam Clay loam, silt	CL, CL-ML	 A-4, A-6, A-	0	 0-3	 05 100	 80-98	 75 00	 4E 0E		5-25
 	34-34	loam, sandy loam		A-4, A-6, A-	0	U-3 	 95-100	80-98 	/5-90 	45-85 	20-45 	5-23
	54-85	Stratified sand	CL, ML, SC,	A-2-4, A-4,	0	0-5	 90-100	 80-95	 40-90	10-80	15-35	NP-20
İ		to clay loam	SM	A-6		İ			İ		İ	i
j		_	j	į	j	j	İ	j	j	į	į	į
663B:												
Clare		Silt loam	CL, ML, CL-ML		0	0	100			85-100		5-15
	14-36	Silty clay loam,	CL	A-6, A-7-6	0	0	100	100	95-100	90-100	35-45	15-30
	26 44	silt loam	 GT		0	 0	 05 100					110 24
	36-44	Clay loam, silty clay loam,	CT	A-6	0	U	95-100	85-99	70-98 	50-90	30-40	10-20
		silt loam	 	 	I I	l I	 	 	l I	 	l I	i
ľ	44-60	Stratified sandy	SC, CL, SC-	 A-4, A-6	0	0	90-100	80-99	60-98	35-65	20-30	4-15
i		loam to loam	SM, CL-ML	İ	i	i İ	i	i	i	i	i	i

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments		rcentag sieve n	e passi: umber	ng	 Liquid	 Plas
and soil name		İ		1	>10	3-10	İ				limit	ticit
j		İ	Unified	AASHTO	inches	inches	4	10	40	200	ĺ	index
	In		1	1	Pct	Pct		Ī	Ī		Pct	
667B:												
Kaneville		Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100			5-15
	9-44	Silty clay loam,	CL	A-6, A-7-6,	0	0	100	100	95-100	90-100	25-45	10-30
		silt loam		A-4								
	44-52	Clay loam, silt	CL-ML, CL,	A-4, A-6	0	0-3	90-100	85-100	60-90	35-85	20-35	5-20
		loam, sandy loam	SC-SM, SC									
	52-80	Stratified clay	SC-SM, SC,	A-2-4, A-4,	0	0-5	90-100	80-98	55-90	20-80	10-25	4-15
		loam to loamy	CL-ML, CL	A-6								
		sand										
668B:												
Somonauk	0 - 9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100		90-100		5-15
	9-26		CL	A-6	0	0	100	100	95-100	90-100	25-40	15-25
		silt loam										
	26-55		CL, SC	A-2-4, A-4,	0	0-3	90-100	85-100	60-95	30-85	20-40	5-15
		sandy loam		A-6								
	55-60		SC-SM, SC,	A-2-4, A-4,	0	0-5	85-100	70-98	50-90	15-80	0-25	NP-10
		loam to gravelly	CL, SM, ML	A-1-b								
		sand		!	!				!		!	
675B:												
Greenbush		Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100			25-35	
	14-60		CL	A-6, A-7-6	0	0	100	100	100	95-100	35-45	15-25
		silt loam										
	60-80	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	11-20
675C2:												
Greenbush	0 6		CL, CL-ML		0		100	 100	100	 95-100		
Greenbusn		Silt loam		A-4, A-6 A-6, A-7-6	0	0	100	100				5-15 15-25
		Silty clay loam Silt loam	CF	A-6, A-7-6	0	0	100	100	100	95-100	35-45	
	40-00	Silt loam	CL	A-6	0	0	1 100	1 100	1 100	 95-100	30-40	11-20
679B:		İ	 	l I			 	 	l I	 	l I	
	0.16	 Silt loam	CL, ML	 A-4, A-6	1 0	0	100	 100	 05 100	 90-100		 8-15
Blackberry		'	CL, ML	A-4, A-6 A-6, A-7-6	0	0	100	100		1		
	10-4/	Silty Clay loam, silt loam	 Сп	A-0, A-/-6	0	0	1 100	1 100	 32-T00	 30-T00	35-45	±5-25
	47 60	SIIT loam Stratified loam	CT CT MT NT	1 2 4	 0	0	00 100	 0E 100	 70-99	 EO 7E	125 25	 5-10
	4/-02	to silt loam	CL, CL-ML, ML	A-4	0	0	 20-T00	 02-T00	10-99	50-75	<u>2</u> 5-35	1 2-10
	62 70	Stratified silt	CT MT CT	 A-4	 0	0	 0E 100	00 100	 60 00	 40.75	 15-30	INTO 10
	02-70	loam to loam	CL-ML, CL,	A-4	0	0	 22-T00	 00-T00	00-99	*± U = / 5	1 12-20	 MP-T0
		1		I I	1	1	 	 	[[[[
		to sandy loam	SM, SC	1	1	1	1	I	I	I	I	

Table 21.--Engineering Index Properties--Continued

			Classif	ication	Frag	ments	Pe:	rcentage	e passi	ng		
Map symbol	Depth	USDA texture			_		:	sieve n	umber		Liquid	Plas
and soil name					>10	3-10					limit	ticit
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct					Pct	
680B:												
Campton	0 - 8	!	1 -	A-4, A-6	0	0	100	100		90-100		7-15
	8-45	Silty clay loam,	ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	30-40	10-20
		silt loam										
	45-51	Loam, clay loam,	CL, SC	A-4, A-6	0	0	90-100	80-100	75-90	35-80	20-35	8-20
		sandy loam										
	51-80	Stratified loamy		A-2-4, A-4,	0	0-5	90-100	70-100	60-90	20-75	15-35	5-15
		sand to gravelly	CL-ML, CL	A-6								
		loam										
712A:			 					 	 	 		
Spaulding	0-22	 Cilturalar loam	 CL	 A-7-6	 0	0	100	 100	 05_100	 05_100	40-46	 15_10
spaulding			1 -	A-7-6 A-7-6, A-6	0	0	100	100		95-100		15-19 17-24
	22-36	silt loam	СП	A-7-0, A-0	0	0	1 100	100 	33-100	33-100 	37-40	17-24
	38_44	Silty clay loam,	 Ст.	 A-6, A-7-6	0	0	100	100	 95_100	 95_100	37-46	 17_24
	30-11	silt loam		A-0, A-7-0		0	1 -00	1	JJ-100 	33-100 	37-40	1
	44-80	1	CL	A-6, A-4	0	0	100	100	 95 - 100	 95-100	24-37	 7-14
	11 00			11 0, 11 1			100	1	55 100	33 100	21 37	, , <u>-</u>
715A:				İ	i	i		! 	! 	! 	İ	
Arrowsmith	0-12	Silt loam	ML, CL, CL-ML	A-6, A-4	0	0	100	100	97-100	95-100	24-37	5-15
	12-30	!		A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	30-39	Silt loam	CL, ML	A-4, A-6	0	0	100	100	96-100	94-100	22-37	7-18
	39-60	Silt loam, silt	ML, CL, CL-ML	A-4, A-6	0	0	100	100	96-100	95-100	20-35	3-15
		İ	İ	İ	i	İ	İ	j	į	İ	i	į
732A:		İ	İ	İ	j	İ	İ	İ	j	İ	į	İ
Appleriver	0 - 8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	8-35	Silty clay loam,	CL, ML	A-6, A-7-6	0	0	100	100	95-100	90-100	35-50	15-25
		silt loam										
	35-45	Silty clay loam,	ML, CL, MH,	A-6, A-7-6	0-1	0-5	95-100	90-100	85-100	80-95	30-55	15-30
		silty clay	CH									
	45-60	Bedrock										
			!	!								
732B:												
Appleriver		!	ML, CL-ML, CL		0	0	100	100		90-100		5-15
	14-34	Silty clay loam,	ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	25-40	10-20
	24 52	silt loam										
	34-58	Silty clay, silty		A-6, A-7-6	0-1	0-5	A2-T00	90-100	85-100	80-95	30-55	15-30
	E0 60	clay loam, clay Bedrock	CH	l I	 	 	 	 	 	 	 	
	00-8C	Dearock										

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Fragi	ments		rcentag sieve n	e passi: umber	-	 Liquid	 Plas
and soil name					>10	3-10					limit	ticit
j			Unified	AASHTO	inches	inches	4	10	40	200	İ	index
	In		1		Pct	Pct		1			Pct	
						[
791A:												
Rush	0-4	Silt loam		A-4, A-6	0	0	100		90-100			5-15
		Silt loam		A-4, A-6	0	0	100	1	90-100			5-15
		silt loam	CT	A-6 	0	0 	100 	100 	İ	85-100 	İ	10-20
	38-45	Clay loam, loam, gravelly sandy loam	CL, SC 	A-2-6, A-6 	0 	1-5 	80-100 	50-100 	40-90 	25-75 	30-40 	10-20
	45-60	Stratified	GP, GP-GM,	A-1-a, A-1-b	0-1	1-5	30-85	15-75	10-40	2-15	0-14	NP
		extremely gravelly	SP, SP-SM	 		 	 	 	 	 	 	
		coarse sand to										
		gravelly loamy		 			 	 				
791B:		 	 	 		[[
Rush	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	20-30	5-15
j	7-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	20-30	5-15
	11-35	Silty clay loam, silt loam	CL	A -6 	0	0 	100 	100 	90-100 	85-100 	30-40	10-20
	35-46	Clay loam, loam, gravelly sandy loam	CL, SC 	A-2-6, A-6 	0 	1-5 	80-100 	50-100 	40-90 	25-75 	30-40 	10-20
	46-60	Stratified extremely gravelly	GP, GP-GM, SP, SP-SM	 A-1-a, A-1-b 	0-1 	1-5 	 30-85 	 15-75 	10-40 	2-15 	0-14 	NP
		coarse sand to gravelly loamy sand	 	 	 	 	 	 	 	 	 	
792A:			l I	l I	l I	l I	 	 		 		
Bowes	0-9	Silt loam	CL-ML, ML, CL	 	0	0	100	100	95-100	 90 - 100	 25-35	5-20
10000		Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	1	90-100	1	5-15
		1		A-6, A-7-6	0	0			90-100			15-25
	43-51	Gravelly clay	CL, SM, CL-	A-2-4, A-4,	0-2	0-20	45-90	30-80	25-75	15-70	10-30	NP-15
		loam, gravelly sandy loam, very	ML, SC	A-6		i I	 	i i			į į	
		gravelly loamy	 	 		 	 	 	 	 	 	
į	51-61	Stratified	GM, GP-GM,	A-1-a, A-1-b	0-2	5-35	30-85	15-80	10-50	2-20	0-20	NP-3
İ		extremely	SP, SP-SM									
		gravelly										
		coarse sand to										
		gravelly sandy										
		loam						1				

 Map symbol	Depth	USDA texture	Classif:	ication	Frag	ments		rcentag sieve n	e passi: umber	_	 Liquid	 Plas
and soil name					>10	3-10					limit	
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In	!			Pct	Pct			!		Pct	
792B:				 								
/92B: Bowes	0 - 7	 Silt loam	 ML, CL, CL-ML	 a _ 4	 0	 0	 100	100	 95-100	 00_100	25-25	5-20
bowes		1	CL	A-6, A-7-6	0	0					35-45	
	, 3,	silt loam		11 0 7 11 7 0			50 100	33 100	30 100	50 100		13 23
i	37-43	Gravelly clay	CL, SM, CL-	A-2-4, A-4,	0-2	0-20	45-90	30-80	25-75	15-70	10-30	NP-15
İ		loam, gravelly	ML, SC	A-6	İ	i			i			İ
j		sandy loam, very	İ	İ	İ	į	į	į	į	į	į	İ
		gravelly loamy										
		sand										
	43-60	Stratified	GM, GP-GM,	A-1-a, A-1-b	0-2	5-35	30-85	15-80	10-50	2-20	0-20	NP-3
		extremely	SP, SP-SM									
l I		gravelly coarse sand to	l I	l I		 	 	 		 		
		gravelly sandy	 	 	l l	 	 	 	 	 	 	
i		loam	 	 		i	! 	 	i	! 	i	
j		İ	İ	İ	İ	į	į	į	į	į	į	İ
794G:												
Marseilles		'	'	A-4, A-6	0	0	100		95-100	1		5-15
	10-35	Silty clay loam,		A-7-6, A-6,	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
		silty clay, clay	 	A-7-5								
l I	35-60	loam Bedrock	 	 	 	 	 	 		 		
	33-00	DedIock	 	 	 	 	 	 	 	 		
Northfield	0-3	Silt loam	SC, CL-ML,	A-4, A-6	0	0	85-100	80-100	70-100	45-90	21-30	4-11
j		İ	SC-SM, CL	İ	j	į	İ	į	į	İ	į	j
	3-16	Loam, silt loam		A-4, A-6	0-1	0-5	90-100	80-100	60-100	40-85	26-37	8-16
		!	SM			[[
	16-60	Bedrock										
 Ritchey	0 - 4	 Silt loam	 ML, CL	 A-4, A-6	 0	 0	 95_100	 95_100	 90-100	 70_95	 28-37	 9-16
kicchey		'	CL-ML, ML, CL	'	0-2	0-5					30-44	1
ľ		silt loam	 		i							
j	18-60	Bedrock			i	j	i	i	j	i	i	i
									[
802B:		!				[[
Orthents, loamy	0-6	1	'	A-6, A-4	0-1		95-100			1		8-20
l I	6-60	Loam, silt loam,	CL, ML	A-6, A-4	0-1	0-5	95-100	80-100	/5-95 	50-80	∠0-40	8-20
 		Ciay IOam	 	 	1	 	 	l I	 	 		
802D:			 	! 		İ		İ	ĺ			
Orthents, loamy	0-6	Loam	ML, CL	A-4, A-6	0-1	0-5	95-100	85-100	80-95	50-80	20-40	8-20
- i	6-60	Loam, silt loam,	'	A-6, A-4	0-1		95-100					8-20

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif:	ication	i	ments		rcentag sieve n	e passinumber	ng	Liquid	
and soil name			Unified	AASHTO	>10 inches	3-10	 4	10	40	200	limit	ticity index
	In	<u> </u>			Pct	Pct	<u> </u>				Pct	
804D:			 	 	 	 	 	 	 	 		
Orthents, acid	0 - 3	Silty clay, silty clay loam	CH, MH, CL	 A-7-6 	, 0 	0	95-100 	90-100	85-100	80-98 	44-62	22-36
	3-60	Silty clay, clay, silty clay loam	MH, CH, CL 	A-7-6 	0 	0 	85-95 	80-90 	75-85 	70-80 	44-62 	22-36
804G:					İ	! 	<u> </u>	İ	İ	! 		
Orthents, acid	0 - 3	Silty clay, silty clay loam	CH, CL, MH	A-7-6 	0 	0 	95-100 	90-100 	85-100 	80-98 	44-62 	22-36
	3-60	Silty clay, clay, silty clay loam	CH, MH, CL 	A-7-6 	0 	0 	85-95 	80-90 	75-85 	70-80 	44-62 	22-36
805B:					İ	! 	<u> </u>	İ	İ	! 		
Orthents, clayey				A-7-6	0	0	1		85-100			
	6-60	Silty clay, clay, silty clay loam	CL, CH	A-7-6 	0	0 	98-100	85-100 	80-98 	75-95 	40-55	25-45
814A:			 	 		! 		l I	l I	 	 	
Muscatune	0-16	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	97-100	95-100	24-37	4-14
		Silty clay loam, silt loam	İ	A-6 	0 	0 	100 	100 	į	İ	35-40 	İ
			,	A-7-6, A-6	0	0	100	100			37-46	
	46-60	Silt loam, silty clay loam	ML, CL 	A-6, A-4 	0 	0 	100	100 	96-100 	93-100	24-37 	7-18
Buckhart	0-15	Silt loam	ML, CL	 A-6, A-7-6, A-4	0 	 0 	100	100	100	 95-100 	35-45	10-20
	15-67	Silty clay loam, silt loam	CL	A-7-6, A-6 	0 	0 	100 	100 	100 	95-100 	40-50 	15-25
	67-80	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	11-20
817A:			 	 	 	 	 	l I	l I	 	 	
Channahon	0-11	Fine sandy loam	SC-SM, SM	 A-2-4, A-4	0	0-2	90-100	 85-100	65-85	25-50	15-25	 NP-7
		Fine sandy loam, loam, sandy loam, gravelly	CL, CL-ML, SC, SC-SM	A-2-4, A-4	0 	0-5	90-100	85-100 	50-90 	25-65	18-30	4-9
	16-19	fine sandy loam Gravelly loamy fine sand, fine sandy loam, loamy fine sand,	 SM, SP-SM 	 A-1-b, A-2-4, A-3, A-4 	 0 	 0-5 	 85-100 	 80-100 	 40-95 	 5-40 	 0-15 	NP-2
	19-60	sand Bedrock	 	 	 	 		 		 		

			Classif	ication	Frag	ments	Pe	rcentag	e passi	ng		
Map symbol	Depth	USDA texture	İ		i		į :	sieve n	umber		Liquid	Plas-
and soil name					>10	3-10					limit	ticity
			Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct					Pct	
817A:												
Hesch				A-2-4, A-4	0	0	1		65-85			1
	12-27	Fine sandy loam,		A-2-4, A-4	0	0-2	90-100	85-100	50-90	25-65	18-30	4-9
		loam, sandy loam										
	27-32	Loamy fine sand,		A-1-b, A-2-4,	0	0-5	90-100	80-100	40-95	5-40	0-15	NP-2
		fine sandy loam,		A-3, A-4								
		sand	1									
	32-60	Bedrock										
817B:			l I	 		 	 	 	 	l I	 	
Channahon	0-7	 Fine sandy loam	SC-SM, SM	 A-2-4, A-4	0	0-2	 90_100	 85_100	65-85	 25-50	15-25	 NP-7
Chamianon				A-2-4, A-4	0	0-5	1		50-90			4-9
	, 13	loam, sandy	SC, SC-SM			0 3	30 100	03 100	30 30	23 03	1	
		loam, gravelly	20, 20 211	! 	i					! 	İ	İ
		fine sandy loam	İ		i	i	İ	İ	i		i	
	15-60	Bedrock										
i			İ		i	i	İ	İ	i	İ	i	İ
Hesch	0-11	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	95-100	90-100	65-85	25-50	15-25	NP-7
	11-23	Fine sandy loam,	CL, CL-ML,	A-2-4, A-4	0	0-2	90-100	85-100	50-90	25-65	18-30	4-9
		loam, sandy loam	SC, SC-SM									
	23-60	Bedrock										
					!							
818A:												
Flanagan		1	CL, CL-ML, ML		0	0	100		95-100			4-14
	18-38		CL, CH	A-7-6	0	0	100	100	95-100	95-100	45-52	22-28
	20 45	silty clay	 GT		 0	 0	100	 100	 95-100	 05 100		114 20
	38-45	Silty clay loam, silt loam	CL	A-6	0	0	1 100	1 100	192-100	 95-100	35-40	14-20
	45-49		 CL	 A-6, A-4	 0	0-3	 05_100	 00_100	 75-90	 60-90	25-22	9-13
	49-60	1		A-4, A-6	0-1	0-5	1		70-90			4-14
	43-00		SC-SM, SC	A-1, A-0 	0-1	0-3	63-100	80-100	10-30	1 3-70	22-33	4-14
			50-511, 50	 		 	 	 	 	 	 	
Catlin	0-11	Silt loam	CL-ML, CL	 A-4, A-6, A-	0	0	100	100	95-100	 90-100	25-45	5-20
	v			7-6			=00	====				5 25
	11-44	Silty clay loam,	CL	A-6, A-7-6	0	0	100	95-100	90-100	90-100	30-50	15-30
i		silt loam			i	i		İ		İ		
	44-49	Clay loam, silty	CL	A-6, A-4	0	0-3	90-100	85-100	70-95	50-80	25-40	10-20
i		clay loam, loam	İ	 	i	i	İ	İ	i	İ	i	İ
i	49-60	Loam, clay loam,	CL-ML, CL	A-4, A-6	0	0-3	90-100	85-100	70-90	45-70	20-35	5-15
İ		silty clay loam	İ	İ	İ	İ	İ	İ	İ	İ	İ	İ
j		1	I	I	I	1	I	I	I	I		1

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

	,		Classif	ication	Fragi	ments		_	e passi	ng		
Map symbol	Depth	USDA texture					'	sieve n	umber		Liquid	1
and soil name		 	 Unified	AASHTO	>10	3-10	 4	10	40	200	limit	ticity index
	In	I	OHITIEG	AADIIIO	Pct	Pct	<u>*</u>	1 10	1	1 200	Pct	Index
	111	l I	 		FCC	FCC	 	 	 	 	FCC	
820E:		İ	İ		! 	i	<u> </u>	! 	! 	! 	i	!
Hennepin	0-5	Loam	CL, ML, SM,	A-6, A-7-6	0-1	0-3	95-100	90-100	70-90	50-85	31-45	13-21
	5-18	Loam, clay loam,		A-6	0-1	0-5	85-100	80-100	70-90	50-85	27-40	 12-21
	18-60		 CL, SC 	 A-6 	 0-1 	0-5	 85-100 	 80-100 	 70-90 	 50-85 	27-40	 12-21
Casco		 Silt loam	 ML, CL-ML, CL		 0	0	 95-100					 3-10
	6-22	Gravelly clay loam, loam, gravelly sandy clay loam	CL, SM, SC, ML 	A-6, A-7-6, A-2-6, A-2-7 	0-1 	0-9 	60-100 	55-100 	40-90 	30-75 	25-46 	11-26
	22-60	Gravelly sand		A-1-a, A-2-4, A-3, A-1-b	0-3 	0-10 	 50-100 	 50-100 	 30-95 	2-20	0-14	NP
820G:		İ			İ	i	<u> </u>	i İ	İ	İ	İ	!
Hennepin	0-5	Loam	ML, CL, SM,	A-6, A-7-6	0-1	0-5	90-100	85-100	70-90	50-85	31-45	 13-21
	5-16	Loam, clay loam,	SC, CL	A-6	0-1	0-5	85-100	80-100	70-90	50-85	27-40	 12-21
	16-60	Loam, clay loam,	CL, SC	A-6	0-1	0-5	85-100	80-100	70-90	50-85	27-40	12-21
Casco	0-7	 Silt loam	CL-ML, ML, CL	 A - 4	l l 0	0	 95-100	 90 - 100	 80-100	 70-85	20-30	 3-10
		Gravelly loam, loam, clay loam	SM, SC, CL,		0-1		50-100					11-26
	15-60	Gravelly sand	GP, GP-GM,	A-1-b, A-2-4, A-3, A-1-a		0-10	30-100	30-100	20-80	1-15	0-14	NP
830.] [[I		 		 	 	 	 		
Landfills		 			 	 		 	 	 		
864. Pits, quarry		 	 		 		 	 	 	 		
865.			1		 	 		 	 	 		
Pits, gravel		İ			 	i I	 	 	 	 	İ	

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments		rcentag sieve n	_	_	 Liquid	 Plas
and soil name	-	İ		1	>10	3-10	İ				limit	ticity
		<u> </u>	Unified	AASHTO	inches	inches	4	10	40	200		index
	In				Pct	Pct					Pct	
969E2:			 	 	 			 	 			
Casco	0-5	Loam	CL, CL-ML, ML	A-4	0	0-5	90-100	85-100	70-95	50-80	20-30	3-10
	5-19	Clay loam, sandy clay loam, gravelly loam	CL, ML, GC,	A-2-6, A-6, A-7-6	0-1	0-5	65-100	50-100	40-90	30-80	25-46	11-26
	19-60	Stratified sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM 	 A-1-a, A-1-b, A-3 	0-3	0-30	 25-100 	 15-85 	 10-75 	2-10	0-14	 NP
Rodman	0-6	 Gravelly loam 	CL-ML, ML, SC-SM, SC	 A-4 	0	0-2	 75-95 	 65-80 	 60-75 	 35-65 	0-30	 3-9
	6-10	Gravelly loam, sandy loam, loam 	CL-ML, SM, ML, SC, SC-	A-1-b, A-2-4, A-4 	0 	0-2	70-95 	50-80 	40-75 	20-55	0-30	NP-10
 	10-60	Stratified very gravelly loamy sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM 	A-1-a 	0-1 	1-5 	30-70 	15-50 	7-20 	2-15 	0-14 	NP
969F:		 	 	 		 	 	 	 			
Casco	0-4	Loam	CL, CL-ML, ML	A-4	0	0-5	90-100	85-100	70-95	50-80	20-30	3-10
	4-15	Clay loam, sandy clay loam, gravelly loam	CL, ML, GC,	A-2-6, A-6, A-7-6	0-1	0-5	65-100 	50-100 	40-90 	30-80	25-46	 11-26
	15-60	Stratified sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM 	A-1-a, A-1-b, A-3 	0-3 	0-30	25-100 	15-85 	10-75 	2-10	0-14	NP
Rodman	0-11	Gravelly loam	CL-ML, ML,	A-4 	0	0-2	75-95	65-80	60-75	35-65	0-30	 3-9
	11-14	Gravelly loam, sandy loam, loam	CL-ML, SM, ML, SC, SC-	A-1-b, A-2-4, A-4	0	0-2	70-95 	50-80 	40-75	20-55	0-30	NP-10
	14-60	Stratified very gravelly loamy sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM 	A-1-a 	0-1	1-5 	30-70	15-50 	7-20 	2-15	0-14	NP

Table 21.--Engineering Index Properties--Continued

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	.i	ments	,	rcentag sieve n	e passi: umber	ng	 Liquid	'
and soil name			Unified	AASHTO	>10	3-10	4	10	40	200	limit	ticity index
	In	<u> </u>	Unified	AASHTO	Inches	Inches	4	10	40	200	 Pct	index
			į		į	į	į	į	į	į	į	
1103A:												
Houghton		Muck	1	A-8	0	0					0-0	NP
	12-60	Muck	PT	A-8	0	0				 	0-0	NP
1480A:					İ			İ				!
Moundprairie	0 - 9	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-100	37-44	16-22
	9-37	Stratified silt	SC, SM, ML,	A-4, A-6, A-	0	0	100	100	85-95	40-95	28-44	9-22
		loam to silty	CL	7-6								
		clay loam										
	37-60	Silty clay loam,	ML, CL, CL-ML	A-4, A-6, A-	0	0	100	100	85-100	60-95	21-44	4-22
		silt loam	į	7-6	İ	İ		ĺ	İ		İ	
3073A:			 				 	 	 	 	 	
Ross	0-23	Loam	CL, CL-ML, ML	A-4, A-6	0	0	90-100	90-100	80-100	65-95	20-35	5-15
		!	CL, CL-ML, ML		0	0	1		70-100			5-20
		silty clay loam		7-6	-	-						
	54-60	Stratified sandy	1	A-4, A-6	0	0-3	90-100	80-100	55-100	40-80	5-35	NP-15
		loam to silt	ML, SC, SC-	,	-							
		loam	SM	İ	İ	İ	İ	İ	İ	İ	İ	
3076A:			 							 		l I
Otter	0-27	Silt loam	 CL	 A-4, A-6, A-	0	0	100	 95-100	90-100	 85-100	25-45	 7-20
00001	0 2,		1	7-6			1	33 100	50 100	03 100	1 23 13	, , <u>2</u> 0
	27_41	Silt loam, loam,	CL	A-6, A-7-6	0	0	100	 95_100	90-100	 75_100	30-45	 10-20
	27-11	silty clay loam	CII	H -0, H -7-0		"	1 100	JJ-100 	50-100	73-100 	1	10-20
	41-65	Silt loam, sandy	CT CT_MT	 A-4, A-6, A-	0	0	00-100	 00_100	 55-95	 50_05	25-45	 5-20
	41-05	loam, silty clay		7-6		"	50-100	00-100 	33-33	30-03	25-45	J-20
		loam		7-0				İ				
					ļ			ļ				
3082A:		1-11-1										
Millington		Silt loam	CL-ML, ML, CL		0	0			80-100			5-20
	26-53	1	CL, ML	A-6, A-7-6	0	0	95-100	80-100	75-100	65-90	28-50	10-22
		clay loam										
	53-60		ML, CL	A-4, A-7-6,	0	0	90-100	80-100	60-95	40-85	20-45	5-20
		loam to silty	!	A-6	!	!		!	!		!	
		clay loam	 		l I			 	 	 	 	
3107A:					İ			İ				
Sawmill	0-29	Silty clay loam	CL, ML	A-7-6	0	0	100	97-100	95-100	85-100	40-46	16-21
j	29-48	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	97-100	85-100	80-95	37-46	16-22
j	48-60	Silty clay loam,	CL, ML	A-7-6, A-6	0	0	100	90-100	85-100	80-95	37-46	16-22
j		clay loam, silt										
		loam										

Table 21.--Engineering Index Properties--Continued

Map symbol	Depth	USDA texture	Classif	ication	Frag	ments		rcentag sieve n	e passinumber	ng	 Liquid	 Plas-
and soil name		į			>10	3-10	ļ		1 40		limit	
	In	1	Unified	AASHTO	Pct	inches	4	10	40	200	 Pct	index
									İ			
3321A:		ļ	ļ	!	[[[!	ļ	ļ	ļ	[
Du Page		Silt loam Sandy loam, loam,	1	A - 6 A - 6	0	0			80-100 50-95			11-18 12-19
	17-34	gravelly sandy clay loam		M		0	 	 	50-95 	33-63 	27-39 	12-19
	34-60	Stratified loam	SC, SC-SM,	A-4, A-6 	0	0	85-100	65-100	50-95	35-85	17-35	3-16
3451A:		l I	 	 		 	 	 	l I	 	l I	
Lawson	0-14	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	85-100	20-37	5-16
		Silt loam, silty clay loam	İ	İ	0	0 	100 	į	90-100 	İ	İ	5-18
	33-80	Silt loam, silty clay loam, loam	CL, ML 	A-4, A-6 	0	0	100	100	90-100	60-100 	23-40	7-20
3480A:		 	 	 		 	 	 	 	 	 	
Moundprairie	0 - 9	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	80-100	37-44	16-22
	9-43	Stratified silt loam to silty clay loam	SC, SM, ML,	A-4, A-6, A- 7-6	0	0	100 	100 	85-95 	40-95 	28-44	9-22
	43-60	Clay loam Silty clay loam, silt loam	 ML, CL-ML, CL 	 A-4, A-6, A- 7-6	0	 0 	 100 	 100 	 85-100 	 60-95 	 21-44 	 4-22
3800A:		İ	i I	 			 			 		
Psamments		Sand, loamy sand	İ	A-1-b	0	0 	į	į	50-75 	İ	į	NP
	60-80	Sand, fine sand	SP-SM, SP, SM	A-3, A-2-4, A-1-b	0	0	85-100 	85-100 	50-75 	2-30	0-9 	NP
7073A:		 	 	 		 	 		 	 	 	
Ross	0-20	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	90-100	90-100	80-100	65-95	20-35	NP-12
	20-36	· ·	ML, CL-ML, CL		0	0	90-100	85-100	70-100	55-95	22-45	3-20
	36-60	silty clay loam Stratified gravelly sandy	 ML, GM, CL, SM	7-6 A-2-4, A-4, A-6	0	0-5	 65-100	 45-100	 30-100	 20-80	 0-30	 NP-12
		loam to silt loam, stratified loamy sand to sandy loam	İ	A=V 		 	 	 	 	 	 	
8073A:		 	 	 			 	 	 	 	 	
Ross	0-32	Loam	CL, CL-ML, ML	A-4, A-6	0	0	90-100	90-100	80-100	65-95	20-35	5-15
İ	32-50	Loam, silt loam,	CL, CL-ML, ML		0	0	90-100	85-100	70-100	55-95	22-45	5-20
	50-60	silty clay loam Stratified sandy loam to silt		7-6 A-4, A-6	0	0-3	 90-100	 80-100	 55-100	 40-80	 5-35	 NP-15
		loam to silt loam 	ML, SC, SC- SM 	 		[

Table 21.--Engineering Index Properties--Continued

ļ			Classif	ication	Frag	ments		_	e passi	ng	[
Map symbol	Depth	USDA texture		1			:	sieve n	umber		Liquid	
and soil name		 	Unified	AASHTO	>10	3-10	 4	10	40	200	limit	ticity index
	In	I	Unitied	AADIIIO	Pct	Pct	<u>*</u>	1 10	1 10	1 200	Pct	Index
 	111		 	 	FCC	FCC	 	 	 	 	FCC	
8107A:				İ	i			İ			İ	İ
Sawmill	0-26	Silty clay loam	CL, ML	A-7-6	0	0	100	97-100	95-100	85-100	40-46	16-21
	26-53	Silty clay loam	CL	A-7-6, A-6	0	0	100	97-100	85-100	80-95	37-46	16-22
	53-60	Stratified silty	CL	A-7-6, A-6	0	0	100	97-100	85-100	80-95	37-46	16-22
		clay loam to										
		clay loam			!						ļ	
8151A:		l I	 	 		 	 	l I	 	 	 	
Ridgeville	0-16	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	100	100	75-100	20-50	15-25	2-10
į	16-40	Fine sandy loam,	SC, SC-SM,	A-4, A-6	0	0	98-100	95-100	75-95	35-60	20-35	5-15
į		loam, sandy clay	CL, CL-ML	j	İ	į	j	į	į	j	į	j
		loam										
	40-60	Loamy sand, sandy	SC-SM, SC,	A-2-4, A-4	0	0	95-100	90-100	65-95	5-45	15-20	NP-8
		loam, fine sand	SM, SP-SM	!							!	
8404A:		 	 	 			 	l I		 	 	
Titus	0-13	Silty clay loam	CH, CL, MH	A-7-5, A-7-6	0	0	100	100	95-100	90-100	49-60	20-30
				A-7-6	0	0	100	100			46-57	
į		silty clay	İ	İ	İ	i	İ	į	i	İ	i	į
j	68-80	Silty clay loam,	CL	A-6	0	0	100	90-100	70-90	55-85	20-40	10-25
		silt loam, loam	[
8451A:		İ	 	 			 	 		 	 	
Lawson	0-13	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	85-100	20-37	5-16
į	13-53	Silt loam, silty	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	85-100	20-39	5-18
j		clay loam	İ	İ	İ	į	İ	į	į	İ	İ	İ
ĺ	53-80	Silt loam, silty	CL, ML	A-4, A-6	0	0	100	100	90-100	60-100	23-40	7-20
!		clay loam, loam	!	!				ļ			ļ	
8516A:] 	 	 		 	 	l I	 	 	[[
Faxon	0-12	Loam	CL	A-6, A-4	0	0	100	95-100	80-95	55-85	28-37	9-16
į	12-36	Clay loam, loam	1	A-7-6, A-6	0	0-5	95-100	80-100	70-97	55-85	32-44	13-22
į		Bedrock									i	i

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol	Depth	Sand	 Silt	Clay	 Moist	Permea-	 Available	 Linear	 Organic	Erosi	on fact	ors	wind erodi-	Wind erodi
and soil name		 			bulk density	bility (Ksat)	water capacity	extensi- bility	matter	 Kw	 Kf		bility group	1
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	[[Ī
23B:		 					l I	 	 					
Blount	0 - 6	5-20	53-77	18-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.32	.32	4	6	48
	6-10	5-20	53-80	15-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-1.0	.37	.37	ĺ		ĺ
	10-23	5-25	27-60	35-48	1.40-1.70	0.06-0.6	0.12-0.19	3.0-5.9	0.2-1.0	.37	.37			
	23-34	5-30	25-63	27-45	1.50-1.70	0.06-0.2	0.12-0.19	3.0-5.9	0.0-0.5	.37	.37			
	34-60	5-30	30-63	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
51A:														
Muscatune	0-16	2-7			1.25-1.45	0.6-2	0.22-0.24	1	3.5-5.0	.28	.28	5	6	48
	16-22	2-7			1.30-1.50	0.6-2	0.18-0.21		0.5-1.5	.37	.37			
	22-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	46-60	2-7	66-83	15-30	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.2	.49	.49			
60C2:														
La Rose	0 - 7	20-40	33-60	18-27	1.10-1.35	0.6-2	0.20-0.24	0.0-2.9	2.0-3.0	.28	.28	5	6	48
	7-21	20-45	20-50	27-35	1.35-1.55	0.6-2	0.15-0.20	3.0-5.9	0.0-1.0	.32	.32			
	21-60	20-50	28-65	15-25	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
60D2:														
La Rose	0 - 7	20-40	33-60	18-27	1.10-1.35	0.6-2	0.20-0.24		2.0-3.0	.28	.28	5	6	48
	7-20	20-45	20-50	27-35	1.35-1.55	0.6-2	0.15-0.20	3.0-5.9	0.0-1.0	.32	.32			
	20-60	20-50	28-65	15-25	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
61A:		i					İ							
Atterberry	0 - 9	2-7			1.25-1.45	0.6-2	0.19-0.26	0.0-2.9	1.5-3.5	.37	.37	5	6	48
	9-17	2-7			1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.1-1.0	.43	.43			
	17-48	2-7			1.35-1.55		0.16-0.20		0.1-0.5	.37	.37			
	48-60	2-7	66-80	15-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.1-0.5	.49	.49			
61B:							j		į	ļ				
Atterberry	0 - 9	2-7			1.25-1.45	0.6-2	0.19-0.26		1.5-3.5	.37	.37	5	6	48
	9-13	2-7	69-83		1.40-1.60	0.6-2	0.17-0.21		0.1-1.0	.43	.43			!
	13-48	2-7	60-74		1.35-1.55	0.6-2	0.16-0.20		0.1-0.5	.37	.37			!
	48-60	2-7	45-80	15-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.1-0.5	.49	.49			
67A:		į	i		į i		j	į	į	į	į	İ		į
Harpster	0-18	3-15			1.20-1.40	0.6-2	0.19-0.22	1	3.5-6.0	.24	.24	5	4L	86
	18-41	3-15			1.35-1.55	0.6-2	0.18-0.21	1	0.8-1.5	.37	.37			
	41-56	3-27			1.40-1.60	0.6-2	0.19-0.26	1	0.5-1.0	.49	.49			!
	56-60	30-50	28-55	15-27	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.1-0.5	.37	.37			

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic	ELUSI	on fac		erodi-	Wind erodi-
and soil name					bulk	bility	water	extensi-	matter	_		! _	bility	
		Pct	Pct	Pct	density	(Ksat) In/hr	capacity In/in	bility	Pct	Kw	Kf	T	group	index
	ın	PCC	PCC	PCt	g/cc 	In/nr	In/in	PCT 	PCt			 	 	1
68A:		į į	i		i i					i	İ	İ	İ	İ
Sable	0-19	0-7	58-73	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	5.0-6.0	.24	.24	5	6	48
	19-23	0-7	58-73		1.20-1.40	0.6-2	0.18-0.20		2.0-4.0	.28	.28			
	23-47	0-7	58-76		1.30-1.50	0.6-2	0.18-0.20		0.2-1.0	.37	.37	ļ		!
	47-60	0-7	65-80	20-28	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
86B:			 		 							 	 	
Osco	0-14	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
i	14-55	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	İ	į	i
İ	55-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49	ĺ	ĺ	Ì
										!				ļ
86C2:	0 - 9	0-7	 67-80	20.26	 1.25-1.30	0.6-2	0.22-0.24		2.0-3.0			 5	 6	48
Osco	9-34	0-7	67-80 58-76		1.25-1.30 1.30-1.35	0.6-2	0.22-0.24		0.0-1.0	37	37	5	6	48
	34-60	0-7	63-80		1.35-1.40	0.6-2	0.18-0.20		0.0-1.0	.49	.49	 	 	1
	01 00											ĺ	! 	i
87A:		į į	i		i i		j		İ	i	İ	İ	İ	İ
Dickinson	0 - 8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	3	86
I	8-20	52-70	12-38	10-18	1.50-1.55	2 - 6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15			
I	20-31		10-38		1.45-1.55	2-6	0.12-0.15		0.5-1.0	.24	.24			
	31-36	75-90			1.55-1.65	6-20	0.08-0.10		0.0-0.5	.15	.15	ļ		ļ
	36-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05		 	
87B:											 		 	l I
Dickinson	0-9	52-75	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	3	86
İ	9-17	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15	ĺ	ĺ	İ
I	17-33	52-75	10-38	10-15	1.45-1.55	2 - 6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
I	33-41	75-90			1.55-1.65	6-20	0.08-0.10		0.0-0.5	1.15	.15			
	41-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05			
87C2:			 		 			 			 	l I	 	
Dickinson	0-11	52-70	12-38	10-18	 1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-2.0	.17	.17	4	3	86
	11-29	52-75	10-38		1.45-1.55	2-6	0.12-0.15		0.5-1.0	.15	.15	i	ĺ	i
İ	29-35	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.17	.17	ĺ	j	į
	35-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.15	.15			
88B:														
Sparta	0-14	 75-95	 0-22	0-10	 1.20-1.40	2-6	0.09-0.12	 0 0-2 9	1.0-2.0	.02	.02	 5	 2	134
bpar ca	14-47	72-95			1.40-1.60	6-20	0.05-0.11		0.1-1.0	1.10	.10]	*	131
		52-100	0-29		1.40-1.60	6-20	0.06-0.08		0.1-1.0	1.17	.17	İ		İ
į		į į	į		į į		İ		İ	İ	İ	İ	İ	İ
88D:										-				
Sparta	0-8	75-95	0-22		1.20-1.40	2-6	0.09-0.12		1.0-2.0	.02	.02	5	2	134
	8-17	75-95			1.20-1.40	2-6	0.09-0.12		0.5-1.0	.02	.02			
	17-33	72-95 52-100			1.40-1.60 1.40-1.60	6-20 6-20	0.05-0.11		0.1-1.0	1.10	1.10		 	1
	33-12	27-T00	0-29	2-10	1 0 - 1 - 0 0	0-20	0.00-0.08	0.0-2.9	0.1-1.0	/	/	!		1

		[[Ţ]		Erosi	on fac	tors	1	Wind
Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic	ļ			1	erodi.
and soil name					bulk	bility	water	extensi-	matter	-		! _		bility
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct		ļ	!		ļ
91A:					 		l I	l I	l I		l I		 	l I
Swygert	0-12	2-15	50-71	27-35	 1.30-1.50	0.2-0.6	0.19-0.22	3 0-5 9	3.0-5.0	.20	.20	4	1 6	48
579010	12-26	1-15			1.40-1.60		0.10-0.13		0.5-1.5	.32	.32	-		10
	26-51	1-20			1.45-1.65		0.10-0.13		0.1-1.0	.32	.32	i	İ	i
	51-60	1-20			1.65-1.85	0.02-0.06	0.05-0.09		0.0-0.5	.37	.37	İ	İ	
														ļ
91B:		0.15										.		
Swygert	0-11 11-23	2-15			1.30-1.50 1.40-1.60		0.19-0.22		3.0-5.0	.20	.20	4	6	48
	23-45	1-15			1.40-1.60 1.45-1.65	0.06-0.2	0.10-0.13		0.5-1.5	32	.32			
	45-60				1.45-1.65 1.65-1.85	0.06-0.2	0.10-0.13		0.1-1.0	32	32			
	45-60	1-20	25-59	38-55	1.65-1.85 	0.02-0.06	0.05-0.09	3.0-5.9 	0.0-0.5	.3/	.3/			
91B2:		i i			j j		į		İ	i	İ	i	İ	į
Swygert	0 - 7	2-15			1.35-1.55	0.2-0.6	0.18-0.21	3.0-5.9	2.0-4.0	.24	.24	4	6	48
	7-30	1-15			1.40-1.60		0.10-0.13		0.5-1.5	.32	.32			
	30-48				1.45-1.65	0.06-0.2	0.10-0.13		0.1-1.0	.32	.32			
	48-60	1-20	25-59	38-55	1.65-1.85	0.02-0.06	0.05-0.09	3.0-5.9	0.0-0.5	.37	.37			
91C2:					 			 	 					
Swygert	0-7	2-15	47-68	30-38	1.35-1.55	0.2-0.6	0.18-0.21	3.0-5.9	2.0-4.0	.24	.24	4	6	48
13	7-18	1-15			1.40-1.60	0.06-0.2	0.10-0.13	6.0-8.9	0.5-1.5	.32	.32	i	İ	i
i	18-36	1-20	30-59	40-50	1.45-1.65	0.06-0.2	0.10-0.13	6.0-8.9	0.1-1.0	.32	.32	i	İ	i
İ	36-60	1-20	25-59	38-55	1.65-1.85	0.02-0.06	0.05-0.09	3.0-5.9	0.0-0.5	.37	.37	i	İ	İ
91C3:								 	 					
Swygert	0-6	2_15	15-66	32-40	 1.38-1.58	0 06-0 2	0.16-0.20	 60_80	0.8-2.0	.32	.32	3	4	86
swygerc	6-24	1-15			11.40-1.65	0.06-0.2	0.10-0.20		0.5-1.5	.32	.32	3	=	00
	24-60	1-13			1.40-1.05		0.05-0.09		0.0-0.5	37	.37	i		
103A:	0 11					0 0 6				1			2	1 1 2 4
Houghton	0-11 11-60				0.20-0.35	0.2-6 0.2-6	0.35-0.45	1	70-99 70-99			3	2	134
						0.2						i		İ
104A:														
Virgil	0 - 7	0-10			1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	7-13	0-10			1.15-1.35	0.6-2	0.22-0.24		0.2-0.5	.43	.43			
	13-49	0-10			1.35-1.55	0.6-2	0.18-0.20		0.2-1.0	.37	.37			
I	49-58	15-60			1.40-1.70	0.6-2	0.11-0.19		0.2-0.5	.32	.32			
	58-60	20-80	0-75	5-30	1.45-1.75	0.6-6	0.05-0.11	0.0-2.9	0.0-0.5	.28	.28			
105A:					ı 			 	 					
Batavia	0-9	0-5	68-80	20-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.37	.37	5	6	48
i	9-41	0-10	55-80	20-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	İ	İ	İ
i	41-60	20-70	10-55	15-30	1.50-1.80	0.6-6	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
I														

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic	Erosi	on fac	tors	erodi-	Wind erodi
and soil name					bulk	bility	water	extensi-	matter			!	bility	
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
105B:		 						 						
Batavia	0 - 9	0-5	68-80	20-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	9-12	0-5	69-85	15-26	1.35-1.55	0.6-2	0.21-0.24	0.0-2.9	0.5-1.0	.43	.43			
	12-45	0-10	55-80	20-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	45-60	20-70	10-55	15-30	1.50-1.80	0.6-6	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
105C2:		 						 						
Batavia	0-10	0-5	68-80	20-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	1.0-2.0	.37	.37	5	6	48
	10-50	0-10	55-80	20-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	50-60	20-70	10-55	15-30	1.50-1.80	0.6-6	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
125A:		 						! 	! 					
Selma	0 - 6	20-45	28-60	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.24	.24	5	6	48
	6-13	20-45	20-53	27-35	1.40-1.60	0.6-2	0.17-0.19	3.0-5.9	3.0-5.0	.17	.17			
I	13-44	15-62	6-67	18-32	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-2.0	.32	.32			
	44-80	30-90	0-63	7-18	1.60-1.90	2-6	0.07-0.19	0.0-2.9	0.0-1.0	.24	.24			
131B:		 						 						
Alvin	0 - 8	55-70	15-35	10-15	1.45-1.65	2-6	0.14-0.17	0.0-2.9	0.5-1.5	.20	.20	5	3	86
	8-11	55-75	10-35	10-15	1.45-1.65	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	11-25	45-70	12-40	15-18	1.40-1.65	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	25-80	65-95	0-32	3-10	1.45-1.65	2-6	0.10-0.15	0.0-2.9	0.0-0.3	.20	.20			
131C2:		 						 	 		 	 		
Alvin	0 - 7	55-70	15-35	10-15	1.45-1.65	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	7-42	45-70	12-40	15-18	1.40-1.65	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24	ĺ	İ	ĺ
	42-80	65-95	2-32	3-10	1.45-1.65	2-6	0.10-0.15	0.0-2.9	0.0-0.3	.15	.15			
132A:		 			 				 			 		
Starks	0-10	0-15	58-82	18-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
İ	10-14	0-15	58-85	15-27	1.30-1.50	0.6-2	0.21-0.23	0.0-2.9	0.5-1.0	.49	.49	ĺ	İ	İ
İ	14-31	0-15	50-73	27-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37	ĺ	İ	İ
	31-43	15-60	10-75	10-30	1.45-1.65	0.6-2	0.12-0.19	0.0-2.9	0.2-0.5	.32	.32	ĺ	İ	ĺ
	43-60	15-85	0-75	5-30	1.50-1.75	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.28	.28	ĺ		
134A:		 			 			 	 					
Camden	0 - 7	2-7	66-83	14-27	1.35-1.55	0.6-2	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-12	2-7	66-83	14-27	1.35-1.55	0.6-2	0.21-0.25	0.0-2.9	0.1-0.5	.49	.49	İ	İ	İ
	12-26	2-7	58-71	22-35	1.40-1.60	0.6-2	0.14-0.24	3.0-5.9	0.1-0.5	.37	.37	İ	İ	İ
i	26-53	30-50	28-50	18-30	1.45-1.65	0.6-2	0.11-0.22	0.0-2.9	0.0-0.5	.32	.32	İ	İ	İ
i	53-60	65-80	14-25	5-20	1.40-1.70	0.6-6	0.12-0.22	0.0-2.9	0.0-0.5	.28	.28	I	I	I

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic		on fac	1	erodi-	Wind erodi
and soil name					bulk density	bility (Ksat)	water capacity	extensi- bility	matter	Kw	 Kf	 T	bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
134B:														
Camden	0 - 9	2-7			1.35-1.55	0.6-2	0.21-0.25	1	1.0-3.0	.43	.43	5	5	56
	9-15	2-7			1.35-1.55	0.6-2	0.21-0.25	1	0.1-0.5	.49	.49			
	15-34	2-7	58-71		1.40-1.60	0.6-2	0.14-0.24	1	0.1-0.5	.37	.37			
	34-40	30-50			1.45-1.65	0.6-2	0.11-0.22	1	0.0-0.5	.32	.32			
	40-60	65-85	1-25	5-20	1.40-1.70 	0.6-6	0.12-0.22	0.0-2.9	0.0-0.5	.28	.28	 		
134C2:		i	İ				Ì		İ				İ	
Camden	0 - 7	2-7	66-83	15-27	1.35-1.55	0.6-2	0.19-0.24	0.0-2.9	0.5-2.0	.43	.43	5	6	48
	7-34	2-7	58-71	25-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.1-0.5	.37	.37			
	34-43	30-50			1.45-1.65	0.6-2	0.11-0.14		0.0-0.5	.32	.32			
	43-80	65-80	10-25	5-15	1.45-1.65	2-6	0.06-0.10	0.0-2.9	0.0-0.3	.28	.28			
134D2:														
Camden	0 - 7	2-7	66-83	15-27	1.35-1.55	0.6-2	0.19-0.24	0.0-2.9	1.0-2.5	.43	.43	5	6	48
	7-34	2-7	58-71	25-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.1-0.5	.37	.37			
	34-43	30-50	28-50	22-30	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.32	.32			
	43-80	65-80	10-25	5-15	1.45-1.65	2-6	0.06-0.10	0.0-2.9	0.0-0.5	.28	.28			
134D3:								 	 					
Camden	0 - 7	1-10	58-71	28-32	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37	4	6	48
	7-37	1-15	50-74	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	37-53	50-65	15-35	15-20	1.30-1.35	2-6	0.11-0.17	0.0-2.9	0.0-0.5	.24	.24			
	53-60	60-90	5-37	3-10	1.30-1.35	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
134F:			 					 	 			 		
Camden	0 - 9	1-10	65-84	15-25	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	2.0-3.0	.37	.37	5	5	56
İ	9-31	1-15	50-74	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	ĺ	İ	İ
	31-40	50-65	15-35	15-20	1.30-1.35	2-6	0.11-0.17	0.0-2.9	0.0-0.5	.24	.24			
	40-60	60-90	5-37	3-10	1.30-1.35	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
146A:		 			 			 	 			 		
Elliott	0-6	2-15	58-78	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.24	.24	4	6	48
į	6-11	2-15	50-71	27-35	1.20-1.40	0.6-2	0.19-0.22	3.0-5.9	2.5-4.0	.20	.20	İ	İ	İ
İ	11-16	1-20	30-61	40-50	1.40-1.60	0.06-0.6	0.10-0.13	6.0-8.9	0.5-1.5	.32	.32	ĺ	İ	İ
	16-41	5-20	40-65	27-40	1.50-1.70	0.06-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	41-60	5-20	45-65	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
146B:		 			 			 	 			 		
Elliott	0 - 9	2-15	58-78	20-27	 1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.24	.24	4	6	48
i	9-13	2-15	50-71	27-35	1.20-1.40	0.6-2	0.19-0.22	3.0-5.9	2.5-4.0	.20	.20	i	i	i
i	13-17	1-20	35-61	38-45	1.40-1.60	0.06-0.6	0.11-0.14	6.0-8.9	0.5-1.5	.32	.32	į	İ	i
į	17-35	5-20	40-65	27-40	1.50-1.70	0.06-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37	İ	İ	İ
	35-60	5-20	45-65	27-35	1.70-1.90	0.06-0.2	0 05-0 10	0.0-2.9	0.0-0.5	.43	.43	I	I	I

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	 Sand	Silt	Clay	Moist	Permea-	Available		Organic	Erosi	on fac	cors	erodi-	
and soil name					bulk	bility	water	extensi-	matter	77	 Kf		bility	
	In	Pct	Pct	Pct	density g/cc	(Ksat)	capacity In/in	bility	Pct	Kw	KI	T	group	Index
	111	FCC	FCC	FCC	g/cc 	111/111	111/111	FCC	FCC		 	 	 	i
146B2:		i i	i				İ			i	İ	i	İ	i
Elliott	0 - 8				1.20-1.40		0.19-0.22		2.5-4.0	.24	.24	4	6	48
	8-14		35-61		1.40-1.60		0.11-0.14		0.5-1.5	.32	.32			
	14-27				1.50-1.70		0.14-0.18		0.1-0.5	.37	.37			
	27-60	5-20	45-65	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
147B2:		 			 	 		 			 	l I	 	
Clarence	0-8	1-15	45-72	27-40	1.20-1.45	0.2-0.6	0.16-0.20	3.0-5.9	2.0-4.0	.24	.24	 3	6	48
	8-35		25-49		1.40-1.60		0.07-0.09		0.0-1.0	.32	.32	-		i
	35-60		25-59		1.65-1.85		0.03-0.07		0.0-0.5	.37	.37	i	i	i
		j i	i				j		İ	i	İ	į	į	i
148A:														
Proctor	0-11	0-15			1.10-1.30		0.22-0.24		3.0-4.0	.28	.28	5	6	48
	11-27	0-15			1.20-1.45		0.18-0.20		0.5-2.0	.37	.37			
	27-44	15-70			1.30-1.55	1	0.13-0.19		1	.32	.32			!
	44-73	15-85	0-80	5-25	1.40-1.70	0.6-6	0.07-0.17	0.0-2.9	0.0-0.5	.28	.28			
148B:		 			 	 		 			 	l I	 	
Proctor	0-11	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.28	.28	 5	6	48
1100001	11-28	0-10			1.20-1.45		0.18-0.20		0.5-2.0	.37	.37			
	28-33	15-70			1.30-1.55		0.13-0.16		0.2-1.0	.32	.32	i	i	i
i	33-60	15-85	0-80	5-20	1.40-1.70	0.6-6	0.07-0.19	0.0-2.9	0.2-0.5	.28	.28	i	i	i
j		į į					j	ĺ	İ	İ		ĺ	ĺ	ĺ
148C2:														
Proctor	0-8				1.10-1.30		0.22-0.24		2.0-3.5	.37	.37	5	6	48
	8-32	0-10			1.20-1.45		0.18-0.20		0.5-2.0	.37	.37			
	32-48	20-70			1.30-1.55		0.13-0.16		0.2-1.0	.32	.32	ļ		!
	48-60	15-85	0-80	10-20	1.40-1.70	0.6-6	0.07-0.19	0.0-2.9	0.2-0.5	.28	.28			
149A:					 	 		 			 	 	 	
Brenton	0-12	0-15	 58-80	20-27	1.25-1.45	0.6-2	0.22-0.26	 0 0-2 9	3.0-5.0	.28	.28	 5	 6	48
	12-28		50-75		1.30-1.55		0.18-0.20		0.5-1.5	.37	.37]		10
	28-44				1.40-1.60		0.15-0.19		0.0-0.5	.32	.32	i	<u> </u>	i
	44-60	15-85	0-80	5-30	1.50-1.70	0.6-6	0.11-0.20	0.0-2.9	0.0-0.5	.28	.28	į	į	i
151A:														
Ridgeville					1.30-1.65		0.15-0.18		2.0-4.0	.17	.17	5	3	86
	16-40	45-70			1.45-1.70		0.15-0.19		0.2-1.0	.24	.24			
	40-60	60-95	0-37	3-10	1.55-1.90	2-20	0.05-0.13	U.U-2.9	0.0-0.5	.15	.15	l I	 	
151B:					 	 		 			 	I I	 	
Ridgeville	0-14	50-80	10-38	10-15	1.30-1.65	 0.6-6	0.15-0.18	0.0-2.9	2.0-4.0	.17	.17	 5	 3	86
. 3	14-56	45-70			1.45-1.70	'	0.15-0.19		0.2-1.0	.24	.24	i	i -	
	56-60	60-95			1.55-1.90		0.05-0.13		0.0-0.5	.15	1	i	i	i
		i i	i		İ		į	İ	İ	i	İ	i	i	i

									[Erosi	on fac	tors		Wind
Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic					erodi
and soil name					bulk	bility	water	extensi-	matter	_		! _	bility	
					density	(Ksat)	capacity	bility	1	Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
152A:		 			 		-		l I		l I	1	l I	
Drummer	0-14	 0-15	50-73	27-35	 1.10-1.30	0.6-2	0.21-0.23	3.0-5.9	4.0-7.0	.24	.24	5	6	48
	14-41	0-15			1.20-1.45	0.6-2	0.21-0.24		0.5-2.0	.37	.37			
	41-47				1.30-1.55	0.6-2	0.17-0.20		0.2-0.5	.32	.32	i	i	i
	47-60	15-80			1.40-1.70	0.6-6	0.11-0.19		0.0-0.2	.28	.28	i	İ	i
		į į			į į		j	İ	İ	İ	į	İ	į	İ
154A:														
Flanagan	0-18	2-7			1.25-1.45	0.6-2	0.16-0.22		3.5-5.0	.28	.28	5	6	48
	18-38	2-7			1.30-1.50	0.2-0.6	0.11-0.17		0.5-1.8	.37	.37			
	38-45				1.30-1.50	0.6-2	0.13-0.19		0.1-0.5	.37	.37	ļ		
	45-49				1.40-1.60	0.6-2	0.13-0.19		0.1-0.5	.37	.37	!	ļ	ļ
	49-60	30-50	28-50	10-27	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.5	.37	.37			
171A:					 		l I	l I	I I		1		1	l i
Catlin	0_11	 0-8	65-82	18-27	 1.25-1.45	0.6-2	0.23-0.26	1 0 0-2 9	2.5-4.0	.28	.28	 5	6	48
Caciii	11-44	0-8			1.25-1.55	0.6-2	0.18-0.20		0.0-1.5	.37	.37		0	1 10
	44-49	20-45			1.40-1.70	0.6-2	0.15-0.19		0.0-0.5	.32	.32	i	i	i
	49-60	20-50			1.60-1.85	0.2-0.6	0.05-0.10		0.0-0.5	.37	.37	i	i	i
		i i			i i		į	i	İ	i	i	i	i	i
171B:		į į			į į		j	İ	İ	İ	į	İ	į	İ
Catlin	0-11	1-7	66-81	18-27	1.30-1.40	0.6-2	0.19-0.23	0.0-2.9	2.5-4.0	.37	.37	5	6	48
	11-16	1-7			1.25-1.40	0.6-2	0.17-0.20	3.0-5.9	1.5-3.5	.37	.37			
	16-41	2-8			1.35-1.45	0.6-2	0.18-0.21		0.5-1.5	.37	.37			
	41-45	20-40			1.45-1.55	0.6-2	0.12-0.16		0.1-0.5	.28	.28	ļ		
	45-60	30-40	33-50	15-27	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.5	.37	.37			
171B2:									1					
Catlin	0-8	 2-7	66-79	20-27	 1.40-1.60	0.6-2	0.18-0.22	0 0-2 9	1.5-3.5	.37	.37	 5	 6	48
Catimi	8-41	2-7			1.35-1.55	0.6-2	0.18-0.21		0.5-1.5	37	37	3	0	40
	41-47	25-40			1.50-1.70	0.6-2	0.14-0.18		0.1-0.5	.32	.32	i	i	i
	47-60	30-45			1.65-1.85	0.2-0.6	0.08-0.12		0.0-0.5	.37	.37	i	i	i
		i i			i i		j	İ	İ	i	İ	i	į	İ
171C2:		į į	Ì		į į		ĺ	ĺ	İ		İ	İ	İ	j
Catlin	0 - 9	2-7	66-78	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.37	.37	5	6	48
	9-40	2-7			1.35-1.55	0.6-2	0.18-0.21		0.5-1.5	.37	.37			
	40-50				1.30-1.50	0.6-2	0.18-0.21		0.1-0.5	.37	.37			
	50-55	20-40			1.50-1.70	0.6-2	0.12-0.16		0.1-0.5	.28	.32	ļ		
	55-60	20-40	30-53	27-30	1.65-1.85	0.2-0.6	0.06-0.12	3.0-5.9	0.0-0.5	.37	.37			
171C3:								[[1			
Catlin	0-5	 2-7	58-71	27 - 25	 1.40-1.60	0.6-2	0.18-0.21	 3 N=5 0	0.8-2.0		.37	4	 6	48
Caciiii	5-44	3-15			1.40-1.60	0.6-2	0.18-0.21		0.8-2.0	37	37	-		40
	44-49	10-23			1.35-1.55	0.6-2	0.19-0.22		0.1-0.5	.37	37	i		i
	49-60	10-20			1.60-1.80	0.2-0.6	0.07-0.13		0.0-0.5	.43	.43	i	İ	i
		i i					1		1		1	i	i	i

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

and soil name	In 0-6 6-24 24-34 34-60	2-15	Pct 	Pct	bulk density g/cc	bility (Ksat) In/hr	water capacity	extensi- bility	matter	Kw	 Kf	 T	bility group	
	0-6 6-24 24-34	2-15 2-15		Pct				bility		Kw	Kf	T	group	index
	0-6 6-24 24-34	2-15 2-15		Pct	g/cc 	In/hr					. 		15	
	6-24 24-34	2-15	 60-88		! !		In/in	Pct	Pct		 	l I	 	
Mayville	6-24 24-34	2-15	60-88				i						! 	
ļ.	24-34				1.35-1.55	0.6-2	0.22-0.24		1.0-2.0	.43	.43	5	5	56
					1.55-1.65	0.6-2	0.18-0.22		0.2-0.5	.37	.37			
!	34-60	25-65			1.55-1.65	0.6-2	0.15-0.19		0.0-0.5	.32	.32	ļ		ļ
		30-70	5-50	10-25	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37		 	
198A:									! 			 	 	
Elburn	0-16	2-7	66-76	22-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
İ	16-49	2-7	58-73	25-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37	ĺ	ĺ	ĺ
	49-58	30-55	30-55	15-20	1.45-1.65	0.6-2	0.14-0.17	0.0-2.9	0.1-0.5	.37	.37			
ļ	58-62	60-80	10-25	5-15	1.50-1.70	2-6	0.06-0.10	0.0-2.9	0.1-0.5	.24	.24	ļ		
199A:			 		 				 		 	l I	 	l
Plano	0-14	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.28	.28	5	6	48
į	14-49	0-10	55-80	20-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37	İ	İ	İ
į	49-60	15-70	0-70	15-32	1.30-1.55	0.6-6	0.09-0.16	0.0-2.9	0.1-0.5	.32	.32	İ	İ	İ
Ţ	60-72	15-80	0-80	5-20	1.50-1.70	2 - 6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28			ļ
199B:			 		 				 	 	 	 	 	l I
Plano	0-15	0-10	63-82	18-27	 1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
į	15-45	0-10	55-80	20-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.37	.37	i	İ	İ
į	45-55	20-55	30-50	15-30	1.50-1.70	0.6-6	0.11-0.16	0.0-2.9	0.1-0.5	.32	.32	İ	İ	İ
į	55-72	15-80	0-80	5-20	1.50-1.70	2 - 6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28	İ		İ
199C2:			 		 				 	 	 	 	 	
Plano	0-8	0-10	63-82	18-27	 1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
į	8-41	0-10	55-80	20-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37	i	İ	İ
į	41-53	15-70	0-70	15-32	1.30-1.55	0.6-6	0.09-0.16	0.0-2.9	0.1-0.5	.32	.32	i	İ	İ
į	53-60	45-75	18-60	10-20	1.50-1.70	2 - 6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28	İ		İ
206A:					 				 			 		
Thorp	0-14	0-10	63-80	20-27	 1.15-1.35	0.6-2	0.16-0.22	0.0-2.9	4.0-6.0	.28	.28	5	6	48
	14-19		65-82		1.30-1.50	0.2-0.6	0.16-0.22		0.2-1.0	.43	.43	ĺ		İ
į	19-43	0-10	55-78	22-35	1.35-1.55	0.06-0.2	0.13-0.19	3.0-5.9	0.2-1.0	.37	.37	i	İ	İ
į	43-50	10-55	15-72	18-30	1.40-1.60	0.6-2	0.10-0.20	0.0-5.9	0.2-0.5	.32	.32	İ	İ	İ
Ţ	50-65	50-75	10-40	5-20	1.50-1.70	0.6-6	0.05-0.13	0.0-2.9	0.0-0.1	.24	.24			
210A:					 				 		 	 	 	l I
Lena	0-8				 0.15-0.45	2-6	0.35-0.45		60-99	i		3	2	134
j	8-60	i	i		0.15-0.45	2-6	0.35-0.45		60-99				İ	
219A:									 		 	 	 	
Millbrook	0 - 7	0-15	 58-82	18-27	 1.40-1.60	0.6-2	0.22-0.24	0.0-2 9	2.0-4.0	.37	.37	 5	l l 6	48
	7-24	0-15			1.45-1.65	0.6-2	0.18-0.20		0.0-1.0	37	37	, ,		10
	24-53	15-60			1.45-1.70	0.6-2	0.12-0.19		0.0-1.0	.32	.32	i	! 	İ
i	53-80	20-85			1.50-1.75	0.6-6	0.11-0.19		0.0-0.5	.28	.28	i	İ	i
į		i			į i		i		İ	į	į	i	İ	İ

Map symbol	Depth	Sand	Silt	Clay	 Moist	Permea-	Available	Linear	Organic	LIOSI	on fac	tors	wind erodi-	Wind erodi
and soil name					bulk	bility	water	extensi-	matter	!		ļ	bility	
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	inde
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
223B:					 		İ	 	 					
Varna	0-12	5-20	53-75	20-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.5-4.0	.24	.24	4	6	48
i	12-30	5-20	30-60	35-50	1.40-1.60	0.06-0.6	0.10-0.19	3.0-5.9	0.5-1.5	.37	.37	i	İ	i
i	30-48	5-20	30-60	30-45	1.50-1.70	0.06-0.2	0.10-0.19	3.0-5.9	0.2-1.0	.37	.37	i	İ	i
į	48-60	5-22	40-68	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	İ	į	į
223B2:								 	 		 			
Varna	0 - 7	5-20	 53-75	20-27	 1.15-1.35	0.6-2	0.22-0.24	 0 0-2 9	2.0-3.0	.28	.28	4	6	48
Varia	7-26	5-20			1.40-1.60		0.10-0.19		0.5-1.5	.37	.37	-	"	10
	26-38	5-20			1.50-1.70		0.10-0.19		0.2-1.0	.37	.37	1	 	
	38-60	5-22			1.70-1.90		0.05-0.10		0.0-0.5	.43	.43			
		ļ										ļ		
223C2: Varna	0 - 9	= 20		20 25	 1.15-1.35	0.6-2	0.22-0.24	 0.0-2.9	2.0-3.0	.28	1.28	 4	 6	 48
varna	9-29	5-20			1.15-1.35 1.40-1.60		0.10-0.19		0.5-1.5	37	.37	4	0	48
	29-50	5-20							0.3-1.5	37	37			
	50-60	5-20			1.50-1.70 1.70-1.90		0.10-0.19		0.2-1.0	.37	.37			
į		i i	i i		j j		j	İ	İ	i	İ	į	į	İ
223C3:														
Varna	0 - 6				1.30-1.50		0.10-0.21		0.5-2.0	.37	.37	3	6	48
	6-16	5-20	30-60		1.40-1.60		0.10-0.19		0.5-1.5	.37	.37			
	16-19	5-20			1.50-1.70		0.10-0.19		0.2-1.0	.37	.37			
	19-60	5-22	40-68	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
223D2:								 	 			 		
Varna	0 - 9	5-20	53-75	20-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.28	.28	4	6	48
	9-31	5-20	30-60	35-50	1.40-1.60	0.06-0.6	0.10-0.19	3.0-5.9	0.5-1.5	.37	.37			
	31-36	5-20	30-60	30-45	1.50-1.70	0.06-0.2	0.10-0.19	3.0-5.9	0.2-1.0	.37	.37	ĺ	İ	ĺ
	36-60	5-22	40-68	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
223D3:			 		 			 	 			 	 	
Varna	0 - 8	5-20	45-68	27-35	1.20-1.40	0.2-0.6	0.20-0.22	3.0-5.9	0.5-2.0	.37	.37	3	6	48
i	8-20	5-20	30-60	35-50	1.30-1.60	0.2-0.6	0.09-0.19	3.0-5.9	0.5-1.0	.37	.37	i	İ	i
į	20-60	5-25	35-68	27-40	1.65-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.2-0.5	.43	.43	į	į	į
228B:								 	 	1		 		
Nappanee	0 - 4	5-20	53-75	20-27	 1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	4	6	48
	4-9	5-20			1.30-1.50	0.6-2	0.20-0.22		0.2-1.0	.37	.37	i		-0
	9-23	5-20			1.40-1.65		0.08-0.14		0.2-1.0	.32	.32	i		i
	23-46	5-25			1.60-1.80		0.06-0.12		0.1-0.5	.32	.32	i		i
	46-60			30-45	1		1	3.0-5.9	0.0-0.5	.37	.37	1	!	1

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	 Sand	Silt	Clay	 Moist	Permea-	Available		Organic	Erosi	on fac		erodi-	Wind erodi-
and soil name					bulk	bility	water	extensi-	matter				bility	
					density	(Ksat)	capacity	bility		Kw	Kf	Т	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
228C2:		 										 	 	
Nappanee	0-5	5-20	42-68	27-38	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	1.0-2.5	.28	.28	4	6	48
I	5-8	5-20	45-68	27-35	1.30-1.50	0.6-2	0.16-0.21	3.0-5.9	0.2-1.0	.37	.37			
	8-23	5-20	20-50	45-60	1.40-1.65	0.06-0.2	0.08-0.14	3.0-5.9	0.2-1.0	.32	.32			
	23-27	5-25			1.60-1.80		0.06-0.12		0.1-0.5	.32	.32			
	27-80	5-25	30-65	30-45	1.70-1.90	0.02-0.06	0.01-0.05	3.0-5.9	0.0-0.5	.37	.37	 	 	
228C3:		 												
Nappanee	0 - 7	5-20	40-68	27-40	1.38-1.58	0.2-0.6	0.16-0.20	3.0-5.9	0.2-1.5	.28	.28	3	6	48
I	7-16	5-20	20-50	45-60	1.40-1.65	0.06-0.2	0.08-0.14	3.0-5.9	0.2-1.0	.32	.32			
	16-20	5-25			1.40-1.65	0.02-0.06	0.06-0.12		0.1-0.5	.32	.32			
	20-60	5-25	20-55	40-50	1.70-1.90	0.02-0.06	0.01-0.05	3.0-5.9	0.0-0.5	.37	.37	 	 	
232A:								 						
Ashkum	0-12	1-15	45-64	35-40	1.20-1.45	0.2-0.6	0.18-0.21	6.0-8.9	3.0-7.0	.20	.20	5	4	86
I	12-29	2-15	40-63	35-45	1.30-1.50	0.2-0.6	0.15-0.18	6.0-8.9	0.5-2.5	.32	.32			
	29-54		40-65		1.50-1.70	0.2-0.6	0.14-0.18		0.1-0.5	.37	.37			
	54-60	5-20	45-68	27-35	1.55-1.75	0.2-0.6	0.07-0.15	3.0-5.9	0.0-0.5	.43	.43	 	 	
233A:														
Birkbeck	0 - 8	0-10			1.20-1.40		0.21-0.29	0.0-2.9	1.5-4.5	.43	.43	5	5	56
	8-11	0-10	63-85		1.35-1.55	0.6-2	0.17-0.22	0.0-2.9	0.1-1.5	.49	.49			
	11-46	0-10			1.35-1.45	0.6-2	0.16-0.20		0.1-1.0	.37	.37			
	46-56	20-40			1.45-1.55	0.6-2	0.11-0.16		0.1-0.5	.32	.32			
	56-60	30-40	33-53	17-27	1.60-1.85	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.5	.37	.37	l I	 	
233B:														
Birkbeck	0 - 4	2-7	66-78	20-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
I	4 - 9	2-7	66-83	15-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.3-1.0	.49	.49			
I	9-54	2-7	58-71	27-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.2-0.5	.37	.37			
	54-60	30-50			1.45-1.65	0.6-2	0.11-0.14		0.1-0.5	.32	.32			
	60-68	30-50	28-50	17-27	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.5	.37	.37	 	 	
233C2:														
Birkbeck	0 - 9	0-10	63-85	15-27	1.20-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-2.0	.43	.43	5	6	48
I	9-42	0-10	55-75	25-35	1.35-1.55	0.6-2	0.14-0.24	3.0-5.9	0.0-1.0	.37	.37			
I	42-48	15-40	25-65	20-35	1.35-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	48-60	15-40	30-68	17-30	1.60-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
234A:		 			 							 	 	
Sunbury	0 - 8	2-7	66-78	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
j	8-15	2-7	66-78	20-30	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49			
j	15-36	2-7	53-63	35-42	1.30-1.50	0.2-0.6	0.17-0.21	6.0-8.9	0.1-0.5	.37	.37			
	36-43	3-15			1.30-1.50		0.17-0.21		0.1-0.5	.37	.37			
	43-47	15-30			1.40-1.60	0.6-2	0.10-0.17		0.1-0.5	.37	.37			
	47-72	20-45	28-50	20 27	1.65-1.85	0.2-0.6	0.08-0.12	0000	0.1-0.3	.37	.37	1	I	1

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	 Available	 Linear	 Organic	Erosi	on fac	tors		Wind erodi
and soil name	i -	j i	İ	_	bulk	bility	water	extensi-	matter		Ī	1	bility	bilit
	İ	į i		İ	density	(Ksat)	capacity	bility	İ	Kw	Kf	т	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	İ		İ		İ
235A:	 	 			 			 	 	1		 		
Bryce	0-13	2-15	40-58	40-50	1.30-1.50	0.2-0.6	0.12-0.16	6.0-8.9	4.0-7.0	.17	.17	5	4	86
-	13-45	5-20	28-53	42-52	1.35-1.60	0.06-0.2	0.09-0.13	6.0-8.9	0.5-3.0	.32	.32	i	i	i
	45-58	5-20	20-55	40-60	1.50-1.70	0.02-0.06	0.07-0.11	6.0-8.9	0.1-0.5	.32	.32	i	i	i
	58-66	5-20	25-57	38-55	1.60-1.75	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37	į	į	į
236A:	 	 			 			 	 					
Sabina	0-8	2-10	63-78	20-27	1.25-1.55	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	8-12	2-10	65-80	18-25	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.1-1.0	.55	.55	İ	İ	İ
	12-43	2-10	48-63	35-42	1.35-1.55	0.2-0.6	0.15-0.19	6.0-8.9	0.1-1.0	.37	.37	ĺ	İ	ĺ
	43-50	15-35	30-65	20-35	1.50-1.75	0.6-2	0.14-0.17	3.0-5.9	0.1-0.5	.32	.32			
	50-80	20-40	28-65	15-32	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.3	.32	.32			
238A:	 							 						
Rantoul	0-17	0-10	40-60	40-50	1.35-1.55	0.2-0.6	0.12-0.23	6.0-8.9	4.0-7.0	.20	.20	5	4	86
	17-40	0-15	25-58	42-60	1.45-1.65	0.02-0.06	0.09-0.13	6.0-8.9	0.5-3.0	.32	.32			
	40-60	0-20	25-65	35-55	1.50-1.70	0.02-0.06	0.08-0.18	6.0-8.9	0.0-1.0	.37	.37			
241C3:														
Chatsworth	0-5	0-10	30-60	40-60	1.35-1.60	0.02-0.06	0.09-0.16	3.0-5.9	0.5-1.0	.32	.32	2	4	86
	5-16	0-10			1.50-1.70		0.05-0.07	3.0-5.9	0.0-0.5	.32	.32			
	16-60	5-15	35-60	35-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37			
241D3:		i			! 		İ							
Chatsworth	0-2	0-10			1.35-1.60		0.09-0.16		0.5-1.0	.32	.32	2	4	86
	2-22				1.50-1.70		0.05-0.07		0.0-0.5	.32	.32			
	22-60	5-15	35-60	35-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37	 		
241E3:		i i			i i		i		İ	į		i		
Chatsworth						0.02-0.06	0.09-0.16	1	0.5-1.0	.32	.32	2	4	86
	7-21	0-10			1.50-1.70		0.05-0.07	1	0.0-0.5	.32	.32			
	21-60 	5-15	35-60	35-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37	 		
241F:		i i					i		İ	į		İ		
Chatsworth						0.02-0.06	0.14-0.19	1	1.0-2.0	.28	.28	3	6	48
	4-24	0-10			1.50-1.70		0.05-0.07		0.0-0.5	.32	.32			
	24-60	5-15	35-60	35-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.32	.32			
241G:							İ							
Chatsworth	0-5	0-10			1.40-1.65		0.14-0.19	3.0-5.9	1.0-2.0	.28	.28	3	6	48
	5-20				1.50-1.70		0.05-0.07	1	0.0-0.5	.32	.32			
	20-60	5-15	35-60	35-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37			

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic		on fac		erodi-	
and soil name		 			bulk density	bility (Ksat)	water capacity	extensi- bility	matter	 Kw	 Kf		bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct			ļ		
42A:		 									 			
Kendall	0 - 7	0-10	65-86	14-25	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
I	7-11	0-10	65-86	14-25	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.1-1.0	.49	.49			
I	11-51	0-10	55-73	27-35	1.30-1.50	0.6-2	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
I	51-58	30-50	33-50	15-27	1.45-1.55	0.6-2	0.11-0.14	0.0-2.9	0.1-0.5	.32	.32			
	58-80	30-55	25-50	10-20	1.55-1.75	0.6-2	0.11-0.15	0.0-2.9	0.1-0.3	.32	.32			
43A:		 	 					 					 	
St. Charles	0 - 9	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
j	9-51	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37	İ	İ	Ì
į	51-60	30-65	33-50	15-30	1.30-1.50	0.6-6	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32	į	į	į
43B:		 	l					 	 		 	 	 	
St. Charles	0-8	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
i	8-50	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37	i	i	i
į	50-60	30-50			1.30-1.50	0.6-6	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32	į	į	į
13C2:		 						 			 			l I
St. Charles	0-8	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
i	8-41	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
į	41-60				1.30-1.50	0.6-2	0.11-0.16		0.0-0.5	.32	.32	į		į
44A:		 						 			 			l I
Hartsburg	0-17	2-7	58-71	27-35	1.20-1.40	0.6-2	0.12-0.18	3.0-5.9	4.5-6.0	.24	.24	5	6	48
i	17-34	2-7	58-71	25-35	1.35-1.55	0.6-2	0.13-0.19	3.0-5.9	0.5-2.0	.37	.37			
	34-60	3-15			1.45-1.65	0.6-2	0.16-0.22		0.1-0.5	.49	.49	į		į
78A:		 						 			 			
Stronghurst	0-7	1-5	66-85	15-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
i	7-11	1-5	65-82	18-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.49	.49	i	i	i
i	11-47	1-4	58-78	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37	i	i	İ
į	47-60	1-4	66-80	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49	į	į	į
78B:		 	l					 	 		 			
Stronghurst	0-10	1-5	66-85	15-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
i	10-48	1-4	58-78	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37	i	i	i
į	48-60	1-4	66-80	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49	į	į	į
79B:							 	 			 		[[
Rozetta	0-7	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
Ï	7-11	0-7			1.20-1.40	0.6-2	0.22-0.24	1	0.1-1.0	.49	.49	i	i	İ
İ	11-55	0-7			1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37	i	i	İ
		0-7			1.40-1.60	0.6-2		0.0-2.9						:

Map symbol	Depth	Sand		Clay	Moist	Permea-	Available	 Linear	Organic	Erosi	on fac	tors	Wind erodi-	Wind erodi-
and soil name		 	i i	-	bulk density	bility (Ksat)	water capacity	extensi-	matter	Kw	 Kf	 T	 bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	İ		İ		İ
280C2:		 	 					 	 		 	 		
Fayette	0-8	0-7	66-75	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	8-64	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37	i	İ	İ
	64-80	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49	į	į	į
290A:		 	 					 	 		 			
Warsaw	0-11	10-30	50-75	15-25	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	2.5-4.0	.24	.24	4	5	56
	11-28	10-60	8-70	20-32	1.35-1.60	0.6-2	0.16-0.19	3.0-5.9	0.5-2.0	.32	.32	ĺ	İ	ĺ
	28-32	30-70	0-50	18-30	1.40-1.65	0.6-2	0.10-0.16	3.0-5.9	0.2-1.5	.28	.32	ĺ	İ	ĺ
	32-80	80-98	0-18	2-8	1.50-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
290B:							1		 		 			
Warsaw	0-10	10-30	50-75	15-25	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	2.5-4.0	.24	.24	4	5	56
	10-24	10-60	8-70	20-32	1.35-1.60	0.6-2	0.16-0.19	3.0-5.9	0.5-2.0	.32	.32			
	24-34	30-70	0-50	18-30	1.40-1.65	0.6-2	0.10-0.16	3.0-5.9	0.2-1.5	.28	.32			
	34-60	80-98	0-18	2-8	1.50-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
290C2:	 													
Warsaw	0-8	10-30	50-75		1.30-1.50		0.20-0.24	0.0-2.9	2.0-3.0	.28	.28	4	5	56
	8-16	10-60	8-70		1.35-1.60		0.16-0.19	3.0-5.9	0.5-2.0	.32	.32			
	16-27	30-70	0-50		1.40-1.65			3.0-5.9		.28	.32			
	27-60 	80-98	0-18	2-8	1.50-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
293A:			i i				İ		İ					
Andres	0-11	10-30			1.35-1.55		0.17-0.21	1	3.5-5.0	.24	.24	5	6	48
	11-26	20-50			1.50-1.70		0.12-0.16	1	0.5-1.5	.32	.32			
	26-50	5-20			1.55-1.75		0.14-0.18	1	0.1-0.5	.37	.37			
	50-60 	5-20	45-73 	22-35	1.65-1.85	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	 		
293B:		i i	i				i	İ	İ					
Andres	0-10	10-30	50-70	20-27	1.35-1.55	0.6-2	0.17-0.21	0.0-2.9	3.5-5.0	.24	.24	5	6	48
	10-36	20-50	15-53		1.50-1.70		0.12-0.16	3.0-5.9	0.5-1.5	.32	.32			
	36-47		45-73		1.55-1.75		0.14-0.18	1	0.1-0.5	.37	.37			
	47-60 	5-20	45-73 	22-35	1.65-1.85	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	 		
294B:			i i				İ		İ					
Symerton					1.30-1.50		0.17-0.21	1	2.5-4.0	.24	.24	5	6	48
	15-19	10-20	45-63	27-35	1.40-1.60	0.6-2	0.17-0.22	3.0-5.9	1.0-3.0	.24	.24			
	19-35	25-50	15-50		1.45-1.70		0.10-0.15	3.0-5.9	0.1-1.0	.28	.32			
	35-39		45-74		1.50-1.70		0.14-0.18		0.1-0.5	.37	.37			
	39-60	2-20	48-78	20-32	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	1		

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	 Sand	Silt	Clay	 Moist bulk	Permea-	 Available water	 Linear extensi-	 Organic matter	Erosi	on fact		erodi-	Wind erodi-
and soil name		 	 		density	bility (Ksat)	capacity	bility	matter	Kw	K£		bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	<u> </u>	<u> </u>			<u> </u>
294C2:		 			 			 	 					
Symerton	0 - 8	10-30	50-70	20-27	1.30-1.50	0.6-2	0.17-0.21	0.0-2.9	2.0-3.0	.28	.28	5	6	48
į	8-31	25-50	15-50	24-35	1.45-1.70	0.6-2	0.10-0.15	3.0-5.9	0.1-1.0	.32	.32		İ	İ
İ	31-40	2-20	45-74	24-35	1.50-1.70	0.2-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37		İ	ĺ
ļ	40-60	2-20	48-78	20-32	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
 295A:		 	 					 	 					
Mokena	0-5	10-30	50-70	20-27	1.35-1.55	0.6-2	0.18-0.22	0.0-2.9	3.5-5.0	.24	.24	4	6	48
į	5-15	25-45	28-50	20-27	1.40-1.55	0.6-2	0.17-0.21	0.0-2.9	3.0-4.0	.24	.24		İ	i
į	15-38	20-50	15-53	24-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.5-1.5	.32	.32		İ	İ
İ	38-42	1-20	20-59	40-60	1.55-1.75	0.06-0.2	0.05-0.12	6.0-8.9	0.1-0.5	.32	.32		İ	ĺ
	42-60	1-20	20-59	40-60	1.65-1.85	0.02-0.06	0.03-0.07	3.0-5.0	0.0-0.5	.37	.37			
295B:		 							 					
Mokena	0-15	10-30	50-70	20-27	1.35-1.55	0.6-2	0.18-0.22	0.0-2.9	3.5-5.0	.24	.24	4	6	48
İ	15-31	20-50	15-53	24-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.5-1.5	.32	.32		İ	ĺ
	31-44	1-20	20-59	40-60	1.55-1.75	0.06-0.2	0.05-0.12	6.0-8.9	0.1-0.5	.32	.32			
	44-80	1-20	20-59	40-60	1.65-1.85	0.02-0.06	0.03-0.07	3.0-5.0	0.0-0.5	.37	.37			
298B:		 			 			 	 					
Beecher	0 - 7	2-15	58-78	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	4	6	48
I	7-24	2-15	35-63	35-50	1.40-1.60	0.06-0.6	0.11-0.15	3.0-5.9	0.2-1.0	.37	.37			
I	24-36	5-20	40-65	27-40	1.50-1.70	0.06-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	36-60	5-20	45-65	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
311B:								 						
Ritchey	0 - 5	5-30	50-77	18-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	2	6	48
I	5 - 9	5-30	45-77	18-25	1.25-1.45	0.6-2	0.20-0.23	0.0-2.9	0.5-1.5	.37	.37			
I	9-17	15-50	20-60	25-35	1.35-1.60	0.6-2	0.14-0.20	3.0-5.9	0.2-1.0	.32	.32			
	17-60					0.06-0.6								
314A:								 						
Joliet	0-15	10-30	50-72	18-27	1.15-1.35	0.6-2	0.17-0.23	0.0-2.9	4.0-5.0	.24	.24	2	6	48
I	15-19	15-50	17-62	23-33	1.35-1.55	0.6-2	0.14-0.20	3.0-5.9	0.5-2.0	.32	.32			
	19-60					0.06-0.6								
315B:		 			 			 						
Channahon	0-11	10-30	50-72	18-27	1.20-1.40	0.6-2	0.17-0.23		2.0-4.0	.24	.24	2	6	48
I	11-18	15-50	15-60	25-35	1.35-1.60	0.6-2	0.14-0.22	3.0-5.9	0.0-1.5	.32	.32			
	18-60					0.06-0.6								
317A:		 			 			 						
Millsdale	0-18	5-20	45-68	27-35	1.30-1.50	0.6-2	0.17-0.22	3.0-5.9	4.0-7.0	.20	.20	3	6	48
İ	18-36	5-35	30-60	35-45	1.40-1.65	0.2-0.6	0.12-0.18	6.0-8.9	0.2-2.5	.37	.37			
1	36-60	l I	1		l I	0.06-0.6	l	l	l	I			i .	1

					!!!			!	!	Erosi	on fact	cors		Wind
Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic	ļ			erodi-	
and soil name					bulk	bility	water	extensi-	matter				bility	
					density	(Ksat)	capacity	bility	<u> </u>	Kw	Kf	Т	group	inde
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
318B:													 	
Lorenzo	0-9	25-40	33-50	 10_27	 1.25-1.40	0.6-2	0.20-0.22	0 0-2 9	2.0-4.0	.24	.24	 3	 6	 48
LOTelizo	9-18	30-80	5-50		11.60-1.70	2-6	0.10-0.19		0.0-1.0	.28	.32]	0	1 40
	18-60	85-99			1.60-1.70		0.10-0.19	1	0.0-1.0	.02	.05		 	
													İ	i
318C2:									1					
Lorenzo	0 - 7	25-40			1.25-1.40		0.20-0.22		2.0-3.0	.28	.28	3	6	48
	7-16	30-80			1.60-1.70		0.10-0.19		0.0-1.0	.28	.32			
	16-60	85-99	0-14	1-5	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
320B:		 		 	 			 	 				 	
Frankfort	0 - 8	5-20	53-75	20-27	1.25-1.45	0.6-2	0.21-0.24	0.0-2.9	2.0-4.0	.28	.28	4	6	48
i	8-12	5-20	48-68	27-32	1.30-1.50	0.6-2	0.19-0.22	0.0-2.9	0.5-2.0	.37	.37		İ	İ
i	12-32	5-20	20-50	45-60	1.40-1.65	0.06-0.2	0.08-0.14	3.0-5.9	0.2-1.0	.32	.32		İ	İ
į	32-37	5-25	20-55	40-55	1.60-1.75	0.02-0.06	0.06-0.12	3.0-5.9	0.1-0.5	.32	.32		İ	İ
	37-60	5-25	25-60	35-50	1.65-1.85	0.02-0.06	0.01-0.05	3.0-5.9	0.0-0.5	.37	.37		ĺ	į
320C2:				 				 	 		 		 	
Frankfort	0 - 7	5-20	45-68	27-35	 1.30-1.50	0.6-2	0.19-0.22	3.0-5.9	2.0-3.0	.24	.24	4	6	48
	7-28	5-20			1.40-1.65		0.08-0.14	1	0.2-1.0	.32	.32			
i	28-32	5-25			1.60-1.75		0.06-0.12	1	0.1-0.5	.32	.32		İ	i
j	32-60	5-25	25-60	35-50	1.65-1.85	0.02-0.06	0.01-0.05	3.0-5.9	0.0-0.5	.37	.37	ĺ	İ	i
325B:								 					 	
Dresden	0-7	2-30	50-90	 10_27	 1.25-1.40	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	 4	 6	 48
Diesden	7-16	5-50			1.35-1.55		0.15-0.20		0.2-1.0	.32	.32	=	0	1 40
	16-30	30-70			1.45-1.70		0.08-0.18		0.0-0.5	.28	.32		 	i i
	30-60	80-99			1.60-1.70		0.02-0.04		0.0-0.5	.02	.05			i
325C2: Dresden												 4		
Dresden	0-9				1.25-1.40		0.20-0.24		2.0-3.0	.28	.28	4	6	48
	9-15	5-50			1.35-1.55 1.45-1.70		0.15-0.20		0.2-1.0	.32	.32			
	15-32 32-60	80-99			1.45-1.70 1.60-1.70		0.08-0.18		0.0-0.5	.28	.32		 	
	32-00	00-55	0-15	1-3		20-100		0.0-2.5		.02	.03			i
327B:		į į	İ	İ	į į		İ	İ	İ	İ	İ	ĺ	İ	į
Fox	0 - 4				1.30-1.50		0.17-0.24		1.0-3.0	.32	.32	4	5	56
	4-7	5-30			1.35-1.55		0.16-0.23		0.2-1.0	.37	.37			
	7-13	5-30			1.50-1.65		0.10-0.22	1	0.2-0.5	.32	.32			
	13-28	20-75			1.55-1.65		0.10-0.19	1	0.0-0.5	.28	.32			
	28-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05			

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	 Sand	Silt	Clay	Moist	Permea-	Available		Organic		on Lac		Wind erodi-	erodi
and soil name					bulk	bility	water	extensi-	matter			! _	bility	
					density	(Ksat)	capacity	bility	1	Kw	Kf	T	group	index
ļ	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
327C2:		 					i							
Fox	0 - 4	5-30	50-80	15-25	1.30-1.50	0.6-2	0.17-0.24	0.0-2.9	1.0-2.0	.32	.32	4	5	56
I	4-12	5-30	50-77	18-35	1.50-1.65	0.6-2	0.10-0.22	3.0-5.9	0.2-0.5	.32	.32			
I	12-24	20-75	5-50	18-35	1.55-1.65	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.28	.32			
	24-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05	ļ		
327D2:		 	 		 			 	 		 	 	 	
Fox	0-8	25-45	30-50	15-25	1.35-1.55	0.6-2	0.15-0.22	0.0-2.9	1.0-2.0	.32	.32	4	5	56
i	8-28	20-75	5-50	18-35	1.55-1.65	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.28	.32	i	i	i
į	28-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05	į	į	į
330A:		 						 	 		 	 	 	
Peotone	0-13	0-10	 50-67	33-40	 1.20-1.40	0.2-0.6	0.21-0.23	6.0-8.9	5.0-7.0	.24	.24	5	4	86
1	13-50	0-10			1.30-1.60	0.2-0.6	0.11-0.20		0.5-3.0	.37	.37	-	i -	
İ	50-60	0-20			1.40-1.65	0.2-0.6	0.10-0.20		0.2-0.5	.43	.43	İ	İ	İ
]							ļ							
344A: Harvard	0-9	0 15		20 27	 1.15-1.35	0.6-2	0.22-0.24		2.0-4.0			 5	 6	 48
harvard	9-36	0-15			1.15-1.35 1.25-1.55	0.6-2	0.15-0.20	1	0.2-1.0	37	37	5	0	40
	36-56	0-15 15-60			1.25-1.55 1.30-1.60		0.13-0.20		1	.32	32		1	l I
	56-60	30-87			1.30-1.00 1.40-1.70		0.12-0.19	1	0.0-0.5	.28	.28			
į		į į	İ				į	į	į	į	į	į	į	į
344B:												_		
Harvard					1.15-1.35	0.6-2 0.6-2	0.22-0.24	1	2.0-4.0	.37	.37	5	6	48
ļ	9-30	0-15 15-60			1.25-1.55 1.30-1.60		0.15-0.20		0.2-1.0	.37	37			
	30-56 56-69	15-60 30-87	10-70 0-65		1.30-1.60 1.40-1.70	0.6-2	0.12-0.19	1	0.0-0.5	.32	.32		 	l I
	30-09	30-67	0-65	5-30	1.40-1.70	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.20	.20			
344C2:		j j	i i		İ		İ	İ	İ	İ	į	İ	İ	İ
Harvard	0 - 7		58-80		1.15-1.35	0.6-2	0.22-0.24	1	2.0-3.0	.37	.37	5	6	48
ļ	7-32	0-15			1.25-1.55	0.6-2	0.15-0.20	1	0.2-1.0	.37	.37			
	32-40	15-60			1.30-1.60	0.6-2	0.12-0.19	1	0.0-0.5	.32	.32	!		ļ
ļ	40-60	30-87	0-65	5-30	1.40-1.70	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.28	.28			l
356A:														
Elpaso	0-21	1-10	55-72	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	4.0-7.0	.24	.24	5	6	48
I	21-44	1-10	50-75		1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	0.2-2.0	.37	.37			
	44-69	2-30			1.35-1.60	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	69-80	2-30	40-83	15-30	1.60-1.85	0.2-0.6	0.05-0.15	0.0-2.9	0.0-0.5	.43	.43			
375A:		 	 					 					 	
Rutland	0-14	0-10	55-73	27-35	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.28	.28	4	6	48
i	14-36	0-10	45-65	35-45	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.2-2.0	.37	.37	į	İ	İ
į	36-44	0-15	50-80	20-35	1.35-1.55	0.2-0.6	0.18-0.22	3.0-5.9	0.2-1.0	.37	.37			
į	44-52	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	52-60	1_15	20-59	40-65	1.65-1.85	0.02-0.06	0.03-0.07	6 0-9 9	0.0-0.5	.37	.37	1	1	I

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	 Silt	Clay	 Moist	Permea-	 Available	 Linear	 Organic	Erosi	on fac	tors	Wind erodi-	Wind erodi
and soil name					bulk	bility	water	extensi-	matter				bility	bilit
j		į į			density	(Ksat)	capacity	bility	İ	Kw	Kf	Т	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	Ţ				
375B:					 			 				 	 	
Rutland	0-13	0-10	55-73	27-35	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	3.0-4.5	.28	.28	4	6	48
	13-40	0-10	45-65	35-45	1.30-1.55	0.2-0.6	0.16-0.18	6.0-8.9	0.2-2.0	.37	.37			
	40-50	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	50-60	1-15	20-59	40-65	1.65-1.85	0.02-0.06	0.03-0.07	6.0-8.9	0.0-0.5	.37	.37			
375B2:								 						
Rutland	0 - 9	0-10	55-73	27-35	1.20-1.40	0.6-2	0.20-0.22	3.0-5.9	2.0-4.0	.32	.32	4	6	48
	9-37	0-10	45-65	35-45	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.2-2.0	.37	.37			
	37-46	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	46-80	1-15	20-59	40-65	1.65-1.85	0.02-0.06	0.03-0.07	6.0-8.9	0.0-0.5	.37	.37			
388B:								 						
Wenona	0-14	1-10	60-79	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.5-4.5	.28	.28	5	6	48
	14-37	1-10	50-64	35-42	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.2-2.0	.37	.37			
	37-50	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	50-60	2-15	30-58	40-45	1.65-1.85	0.02-0.06	0.05-0.08	6.0-8.9	0.0-0.5	.37	.37			
388B2:								 	 					
Wenona	0 - 9	1-10	60-79	20-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	9-42	1-10	50-64	35-42	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.2-2.0	.37	.37			
	42-52	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	52-60	2-15	30-58	40-45	1.65-1.85	0.02-0.06	0.05-0.08	6.0-8.9	0.0-0.5	.37	.37			
388C2:								 						
Wenona	0 - 6	1-10	60-72	27-39	1.20-1.40	0.6-2	0.20-0.22	3.0-5.9	2.0-4.0	.32	.32	5	4	86
	6-45	1-10	50-64	35-42	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.2-2.0	.37	.37			
	45-54	1-15	25-59	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	54-60	2-15	30-58	40-45	1.65-1.85	0.02-0.06	0.05-0.08	6.0-8.9	0.0-0.5	.37	.37			
397F:														
Boone	0 - 6	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.0-1.0	.02	.02	2	2	134
		75-100			1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
		85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60					0.2-2							 	
413B:					 									
Gale	0 - 4	5-15			1.25-1.45	0.6-2	0.22-0.24		1.0-3.0	.43	.43	4	5	56
	4-7				1.30-1.50	0.6-2	0.18-0.22		0.5-1.0	.49	.49			
	7-30	5-15			1.35-1.55	0.6-2	0.18-0.22		0.5-1.0	.49	.49			
	30-37	50-88			1.40-1.65	6-20	0.08-0.10		0.0-0.5	.15	.15			
	37-60					0.2-2	l		1			I	1	1

Table 22.--Physical Properties of the Soils--Continued

and soil name	In 0-6 6-9 9-31 31-38 38-60	Pct		Pct	bulk density g/cc 	bility (Ksat) In/hr	water capacity In/in	bility	matter	 Kw	 Kf	 T	bility	bility index
	0-6 6-9 9-31 31-38	 5-15 5-15 5-15	58-80							Kw	Kf	T	~~~~	indan
	0-6 6-9 9-31 31-38	 5-15 5-15 5-15	58-80		g/cc 	In/hr	In/in	D t			<u> </u>		group	Tugex
	6-9 9-31 31-38	5-15 5-15		15-27	 		i	Pct	Pct					
Gale 	6-9 9-31 31-38	5-15 5-15		15-27	ı				 					
	9-31 31-38	5-15	58-83	13-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	3	5	56
	31-38		22 03	12-27	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.49	.49			
			50-75	20-35	1.35-1.55	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.49	.49			
	30-60	42-88	1-33	2-28	1.40-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	36-00					0.2-2								
435A:									 					
Streator	0-13	1-10	50-72	27-40	1.20-1.40	0.6-2	0.22-0.24	6.0-8.9	4.0-7.0	.24	.24	5	4	86
	13-42	1-10	45-64	35-45	1.30-1.55	0.2-0.6	0.18-0.20	6.0-8.9	0.5-2.0	.37	.37			
	42-68	2-15	25-58	40-60	1.45-1.70	0.06-0.6	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
	68-80	2-15	20-58	40-60	1.65-1.85	0.02-0.06	0.03-0.07	6.0-8.9	0.0-0.5	.37	.37			
448B:									 					
Mona	0-11	0-15	58-80	20-27	1.10-1.30	0.6-2	0.17-0.24	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	11-39	15-50	15-60	25-35	1.35-1.55	0.2-0.6	0.15-0.20	3.0-5.9	0.2-0.5	.32	.32			
	39-44	0-10	30-60	40-50	1.40-1.65	0.06-0.2	0.05-0.08	6.0-8.0	0.2-0.5	.32	.32			
	44-60	0-10	30-60	40-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37			
448C2:					 				 					
Mona	0 - 7	0-15	58-80	20-27	1.10-1.30	0.6-2	0.17-0.22	0.0-2.9	2.0-4.0	.28	.28	4	6	48
	7-33	15-50	15-60	25-35	1.35-1.55	0.2-0.6	0.15-0.20	3.0-5.9	0.2-0.5	.32	.32			
	33-37	1-10	30-59	40-50	1.40-1.65	0.06-0.2	0.05-0.08	6.0-8.9	0.2-0.5	.32	.32			
	37-60	1-10	30-59	40-50	1.70-1.90	0.02-0.06	0.03-0.05	3.0-5.9	0.0-0.5	.37	.37			
512B:		 	 		 				 			 		
Danabrook	0-13	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
į	13-33	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37	ĺ	İ	ĺ
	33-50	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	50-60	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			
512C2:			 		 				 					
Danabrook	0-8	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.37	.37	5	6	48
i	8-27	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37	İ	i	İ
i	27-40	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32	İ	İ	İ
į	40-65	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37		İ	
516A:		 	 		 				 			 	 	
Faxon	0-12	20-45	28-60	18-27	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	4.0-6.0	.24	.24	3	6	48
i	12-36	20-50	20-55	18-35	1.40-1.55	0.6-2	0.15-0.19	0.0-2.9	0.2-1.5	.32	.32	İ	i	İ
i	36-60	i i			i i	0.2-2				i		İ	i	İ
į		į į	į		İ		i i		İ			ĺ	İ	İ

							!	!	Erosi	on rac	tors		Wind
Depth	Sand	Silt	Clay							1			1
								matter	_		! _		
	<u> </u>						1		Kw	Kf	T	group	index
In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
	 			 		l	! 	 					
0 - 9	20-45	31-55	10-24	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	5	5	56
9-30	25-45	21-55	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32	i	i	i
30-40	30-45	28-53	17-27	1.45-1.65	0.6-2	0.15-0.19	0.0-2.9	0.0-0.5	.32	.32	İ	į	i
40-60	35-60	20-50	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37	į	į	į
0-10	 20-45	31-55	10-24	 1 30-1 45	0 6-2	0 20-0 24	0 0-2 9	1 1 0-2 0	32	32		5	56
				'					1	1		3	1
						1			1		i	i	
35-60				'	0.2-0.6			0.0-0.5	.37	.37	İ	İ	
0 4		E0 00 l	15 27		0 6 2	10 22 0 24	0 0 2 0	1 1 0 2 0	22	22	4		48
						1			1		42	0	48
				'					1	,	1	1	i i
				'		1			1		1	1	i i
39-60	1				0.06-0.2	1		0.0-0.5	.43	.43	i		
	İ	į								İ	į		
						1			1		4	6	48
						1			1				
						1							
28-60	5-23 	42-68	27-35	1.70-1.90 	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
	i i	i		j j		i	į	į	İ	İ	İ	İ	İ
				'					1	1	3	6	48
				'		1			1				
	1					1					ļ		
27-60	5-23	42-68	27-35	1.70-1.90 	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
	i i	i					İ	İ			i		
0 - 6	5-15	58-80	15-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.32	.32	4	6	48
6-20	5-15	35-60	35-50	1.60-1.70	0.06-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.37	.37			
20-28	5-20	38-65	30-42	1.65-1.75	0.06-0.2	0.10-0.20	3.0-5.9	0.1-0.5	.37	.37			
28-60	5-23	42-68	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
0-9	5-15	45-68	27-40	1.45-1.60	0.2-0.6	0.10-0.21	3.0-5.9	0.5-1.0	.37	.37	3	6	48
9-21	5-15	35-60	35-50	1.60-1.70	0.06-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.37	.37	i	i	i
21-25	5-20			'	0.06-0.2			0.1-0.5	.37	.37	i	i	i
25-60	5-23	42-68	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	i	į	i
	9-30 30-40 40-60 0-10 10-27 27-35 35-60 0-4 4-10 10-21 21-39 39-60 0-6 6-21 21-28 28-60 0-9 9-21 21-27 27-60 0-6 6-20 20-28 28-60	In Pct 0-9 20-45 9-30 25-45 30-40 30-45 40-60 35-60 0-10 20-45 10-27 25-45 27-35 30-45 35-60 35-60 0-4 5-15 4-10 5-15 10-21 5-15 21-39 5-20 39-60 5-23 0-6 5-15 6-21 5-15 21-28 5-20 28-60 5-23 0-6 5-15 9-21 5-15 21-27 5-20 27-60 5-23 0-6 5-15 6-20 5-15 20-28 5-20 28-60 5-23 0-9 5-15 9-21 5-15 20-28 5-20 28-60 5-23	In Pct Pct 0-9 20-45 31-55 9-30 25-45 21-55 30-40 30-45 28-53 40-60 35-60 20-50 0-10 20-45 31-55 10-27 25-45 21-55 27-35 30-45 28-53 35-60 35-60 20-50 0-4 5-15 58-80 4-10 5-15 58-80 10-21 5-15 35-60 21-39 5-20 38-65 39-60 5-23 42-68 0-6 5-15 58-80 6-21 5-15 35-60 21-28 5-20 38-65 28-60 5-23 42-68 0-9 5-15 45-68 9-21 5-15 35-60 21-27 5-20 38-65 27-60 5-23 42-68 0-6 5-15 58-80 0-6 5-15 35-60 21-27 5-20 38-65 27-60 5-23 42-68 0-6 5-15 58-80 0-7 5-15 35-60 20-28 5-20 38-65 28-60 5-23 42-68 0-9 5-15 35-60 20-28 5-20 38-65 28-60 5-23 42-68 0-9 5-15 45-68 9-21 5-15 35-60 21-25 5-20 38-65	In Pct Pct Pct 0-9 20-45 31-55 10-24 9-30 25-45 21-55 20-34 30-40 30-45 28-53 17-27 40-60 35-60 20-50 15-20 0-10 20-45 31-55 10-24 10-27 25-45 21-55 20-34 27-35 30-45 28-53 17-27 35-60 35-60 20-50 15-20 0-4 5-15 58-80 15-27 4-10 5-15 58-80 15-27 10-21 5-15 35-60 35-50 21-39 5-20 38-65 30-42 39-60 5-23 42-68 27-35 0-6 5-15 58-80 15-27 6-21 5-15 35-60 35-50 21-28 5-20 38-65 30-42 28-60 5-23 42-68 27-35 0-9 5-15 45-68 27-40 9-21 5-15 35-60 35-50 21-27 5-20 38-65 30-42 27-60 5-23 42-68 27-35 0-6 5-15 58-80 15-27 6-20 5-15 35-60 35-50 20-28 5-20 38-65 30-42 28-60 5-23 42-68 27-35 0-9 5-15 45-68 27-40 9-21 5-15 35-60 35-50 20-28 5-20 38-65 30-42 28-60 5-23 42-68 27-35 0-9 5-15 45-68 27-40 9-21 5-15 35-60 35-50 21-25 5-20 38-65 30-42 28-60 5-23 42-68 27-35	Dulk density	Dulk Dility Description Dulk Dility Description Dulk Dility Description Descript		Dulk Dulk Dility Capacity Dility Capacity Dility	No. Dulk D	Depth	Depth Sand Silt Clay Moist bility water extensity matter	Depth Sand Silt Clay Moist Dermea- Mariable Linear water extensi- matter	Depth Sand Silt Clay Moist bility water extensis wat

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	 Depth	Sand	 Silt	Clay	 Moist	Permea-	Available		Organic	Erosi	on fac	tors	erodi-	1
and soil name					bulk	bility	water	extensi-	matter				bility	
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
530E2:		 						 						
Ozaukee	0-6	5-15	58-80	15-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.32	.32	4	6	48
	6-27	5-15	35-60	35-50	1.60-1.70	0.06-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.37	.37			
	27-31	5-20	38-65	30-42	1.65-1.75	0.06-0.2	0.10-0.20	3.0-5.9	0.1-0.5	.37	.37			
	31-60	5-23	42-68	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
530F:		 						 						
Ozaukee	0-5	5-15	58-80	15-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	4	6	48
	5-29	5-15	35-60	35-50	1.60-1.70	0.06-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.37	.37			
	29-36	5-20	38-65	30-42	1.65-1.75	0.06-0.2	0.10-0.20	3.0-5.9	0.1-0.5	.37	.37			
	36-60	5-23	42-68	27-35	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
541B:		 						 						
Graymont	0-12	0-10	63-78	22-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	12-33	0-10	55-75	25-35	1.30-1.50	0.6-2	0.16-0.20	3.0-5.9	0.2-2.0	.37	.37	ĺ	İ	İ
	33-38	10-20	40-68	22-40	1.50-1.70	0.06-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	38-60	10-20	50-66	24-34	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
541B2:								 						
Graymont	0-8	0-10	63-78	22-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.37	.37	5	6	48
	8-24	0-10	55-75	25-35	1.25-1.45	0.6-2	0.16-0.20	3.0-5.9	0.0-2.0	.37	.37			
	24-35	10-20	40-68	22-40	1.50-1.75	0.06-0.6	0.14-0.18	3.0-5.9	0.0-0.5	.37	.37			
	35-60	10-20	46-66	24-34	1.50-1.75	0.06-0.2	0.05-0.10	3.0-5.9	0.0-0.5	.43	.43			
541C2:								 						
Graymont	0-9	0-10	63-78	22-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.37	.37	5	6	48
	9-30	0-10	55-75	25-35	1.30-1.50	0.6-2	0.16-0.20	3.0-5.9	0.2-2.0	.37	.37			
	30-38	10-20			1.50-1.70		0.14-0.18		0.1-0.5	.37	.37			
	38-60	10-20	50-66	24-34	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
542A:								 						
Rooks	0-15	1-10	55-72	27-35	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.24	.24	5	6	48
	15-30	1-10	45-72	27-45	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	30-45	5-15	55-85	10-30	1.45-1.65	0.2-0.6	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	45-60	5-15	40-68	27-45	1.65-1.85	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
542B:								 						
Rooks	0-10	1-10	55-72	27-35	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.24	.24	5	6	48
j	10-28	1-10	45-72	27-45	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	28-49	5-15	55-85		1.45-1.65		0.16-0.19	0.0-2.9	0.0-0.5	.37	.37			
	49-60	5-15	40-68	27-45	1.65-1.85	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			

Map symbol	 Depth	 Sand	 Silt	Clay	 Moist	Permea-	 Available		 Organic	Erosi	on fac	tors	erodi-	Wind erodi
and soil name					bulk densitv	bility (Ksat)	water capacity	extensi-	matter	 Kw	 Kf		bility group	
	l In	Pct	Pct	Pct	density q/cc	(Ksat) In/hr	capacity In/in	Dility Pct	Pct	KW	KI	T 	group	index
					9,00	,	,			i		i		İ
549B:	j	į į	į į		j i		j	ĺ	İ	İ	İ	į	j	İ
Marseilles	0-5	0-10	63-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	3	5	56
	5-9	0-10	63-85	15-27	1.20-1.40	0.6-2	0.18-0.20	0.0-2.9	0.5-1.0	.49	.49			
	9-28	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	28-40	1-25	33-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.0-0.5	.43	.43			
	40-60					0.01-0.2								
549C2:	 		 					 				 	 	
Marseilles	0-5	0-15	58-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	3	6	48
	5-16	0-15	43-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37	ĺ	ĺ	ĺ
	16-26	0-25	33-75	25-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.5-1.0	.37	.37			
	26-60					0.01-0.2								
549D2:	 	 	 		 			 				 	 	
Marseilles	0-5	0-25	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.32	.32	3	6	48
	5-27	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.0-0.5	.37	.37	İ	İ	İ
	27-60					0.01-0.2								į
549F:	 		 		 			 				 	 	
Marseilles	0-10	0-15	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	3	5	56
	10-35	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.0-0.5	.37	.37	i	İ	i
	35-60	ļ i			ļ ļ	0.01-0.2				ļ		į	į	į
549G:	 		 		 			 				 	 	
Marseilles	0-10	0-15	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	3	5	56
	10-35	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.0-0.5	.37	.37	į	İ	İ
	35-60				ļ ļ	0.01-0.2		ļ				į	į	į
554B:	 	 	 		 			 				 	 	
					: :		1	:	:	1	:	1	!	

0.6-2

0.2-0.6

0.22-0.24 | 0.0-2.9 | 1.0-3.0 | .28

|0.18-0.20| 6.0-8.9 | 0.2-1.0 | .37

0.08-0.12 | 6.0-8.9 | 0.1-0.5 | .32

0.18-0.22 3.0-5.9 1.0-2.5 28

0.16-0.21 3.0-5.9 | 0.2-1.0 | .37

0.06-0.12 | 3.0-5.9 | 0.1-0.5 | .32

|0.01-0.05| 3.0-5.9 | 0.0-0.5 | .37

0.08-0.14 | 3.0-5.9 | 0.2-1.0 | .32

0.03-0.07 | 6.0-8.9 | 0.0-0.5 | .37 | .37

0.2-1.0 | .49

0.18-0.22 0.0-2.9

.28 | 4 | 5

.28 | 4 |

48

.49

.37

.32

.37

.32

.32

.37

0-10 | 63-80 | 20-27 | 1.20-1.40 | 0.6-2

1-15 | 25-64 | 35-60 | 1.45-1.70 | 0.06-0.6

2-20 | 42-71 | 27-38 | 1.30-1.50 | 0.6-2

2-20 | 20-53 | 45-60 | 1.40-1.65 | 0.06-0.2

5-25 | 20-60 | 35-55 | 1.70-1.90 | 0.02-0.06

40-55 | 1.60-1.80 | 0.02-0.06

1-15 | 20-59 | 40-65 | 1.65-1.85 | 0.02-0.06

0-10 | 63-85 | 15-27 | 1.30-1.55 |

0-10 | 45-64 | 35-45 | 1.35-1.55 |

2-20 | 45-71 | 27-35 | 1.30-1.50 |

5-25 | 20-55 |

Kernan-----|

St. Clair-----

560D2:

0-5

12-36

36-43

43-60

0-5

5-8

8-22

22-37

37-65

5-12

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	 Sand	Silt	Clay	Moist	Permea-	Available		Organic		on fac	LOIS	erodi-	Wind erodi-
and soil name					bulk	bility	water	extensi-	matter	!		ļ	bility	
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	l I		 	 	l I
60E:							i			i		i		
St. Clair	0 - 5	2-20	42-71		1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	1.0-3.0	.28	.28	4	6	48
	5-12	2-20			1.40-1.65		0.08-0.14		0.2-1.0	.32	.32			
	12-26		20-55		1.60-1.80		0.06-0.12		0.1-0.5	.32	.32			
	26-60	5-25	20-60	35-55	1.70-1.90	0.02-0.06	0.01-0.05	3.0-5.9	0.0-0.5	.37	.37			
67B:		 			 				 		 	l I	 	
Elkhart	0-13	1-7	66-85	15-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	2.5-4.0	.32	.32	5	6	48
	13-37	1-7	58-77	22-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-2.0	.37	.37	i	İ	İ
İ	37-52	1-7	63-85	15-30	1.30-1.50	0.6-2	0.18-0.23	0.0-2.9	0.1-0.5	.49	.49	İ	j	İ
	52-60	1-7	66-85	15-27	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.5	.49	.49			
72A:									 				 	
Loran	0-14	 0-7	66-80	20-27	 1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	 4	 6	48
	14-39	0-7	45-78		1.30-1.50	0.6-2	0.18-0.20		0.5-2.0	.43	.43	-		10
	39-53		15-60		1.50-1.70		0.04-0.08		0.0-0.5	.32	.32	i	İ	i
	53-60	i				0.01-0.2						İ	İ	İ
72B:														
Loran	0-12	0-7	66-80		1.10-1.30		0.22-0.24		4.0-5.0	.28	.28	4	6	48
	12-43 43-51	0-7	45-78 15-60		1.30-1.50 1.50-1.70		0.18-0.20		0.5-2.0	.37	37		 	
	51-60	5-35 			1.50-1.70	0.06-0.2	0.04-0.08	3.0-3.9	0.0-0.5	.32	.32	l I	 	l
	02 00	i i	i			0102 012	i			i		i		İ
72C2:		j j	į		j i		j		İ	İ	į	İ	İ	į
Loran	0 - 9	0-7			1.10-1.30		0.22-0.24		2.0-3.0	.37	.37	4	6	48
	9-41	0-7			1.30-1.50	0.6-2	0.18-0.20		0.5-2.0	.37	.37			
	41-60	5-35	14-60	40-50	1.50-1.70	0.06-0.2	0.04-0.08	3.0-5.9	0.0-0.5	.32	.32			
14A:		 			 				 		 	l I	 	
Chenoa	0-12	1-8	57-72	27-35	1.20-1.40	0.6-2	0.19-0.22	3.0-5.9	3.5-5.0	.28	.28	5	6	48
į	12-32	1-8	47-64	35-45	1.30-1.50	0.2-0.6	0.18-0.21	6.0-8.9	0.5-1.5	.37	.37	i	į	İ
j	32-36	5-20	40-70	25-40	1.50-1.70	0.2-0.6	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37	ĺ	ĺ	Ì
	36-60	5-20	45-71	24-35	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	ļ		ļ
14B:									 				 	
Chenoa	0-15	1-8	57 - 72	27-35	 1.20-1.40	0.6-2	0.19-0.22	3 0-5 9	3.5-5.0	.28	.28	 5	 6	48
	15-28	1-8	47-64		1.30-1.50	0.6-2	0.18-0.21		0.5-1.5	.37	.37]		10
	28-47		40-70		1.50-1.70		0.14-0.18		0.1-0.5	.37	.37	i	İ	İ
į	47-60	5-20	45-71	24-35	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43	İ	İ	į
		ļ !					į į							
62B:	0 0		E0 05	15.05		0.6.0		0 0 0 0						
Barony	0-8		58-85 50-75		1.15-1.35	0.6-2	0.22-0.24		2.0-4.0	.37	.37	5	6	48
	8-34 34-54	0-15 15-60			1.25-1.55 1.30-1.60	0.6-2 0.6-2	0.15-0.20		0.2-1.0	.37	37	l I	l I	
	54-85	13-60			1.30-1.60 1.40-1.70		0.12-0.19		0.0-0.5	.28	.32	I I	 	1
	31 03	. 20 50	0,5	2 20	0/0	3.0 0	10.00 0.10	2.0 2.0				!	!	!

		[Erosi	on fac	tors		Wind
Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic					erodi-
and soil name	 	 		 	bulk density	bility (Ksat)	water capacity	extensi-	matter	Kw	 Kf	 Tr	bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct			 	 	
663B:	 	 			 			 	 		 		 	
Clare	0-14	2-15	63-80	18-27	1.30-1.40	0.6-2	0.22-0.24	0.0-2.9	2.5-4.0	.28	.28	5	6	48
	14-36	1-10	55-74	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37	İ	İ	İ
	36-44	15-45	23-58	20-32	1.40-1.55	0.6-2	0.13-0.19	3.0-5.9	0.2-0.5	.32	.32	ĺ	ĺ	İ
	44-60	40-60	25-45	10-20	1.50-1.75	0.6-2	0.13-0.19	0.0-2.9	0.1-0.5	.32	.32		 	
667B:	 				 						 		 	
Kaneville	0-9	0-10	63-85	15-27	1.25-1.45	0.6-2	0.22-0.25	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	9-44	0-10			1.30-1.50	0.6-2	0.18-0.20		0.5-1.0	.37	.37			
	44-52	15-60			1.30-1.50	0.6-2	0.11-0.16		0.2-0.5	.32	.32			
	52-80	20-80	0-70	10-30	1.40-1.70	0.6-6	0.07-0.11	0.0-2.9	0.0-0.2	.28	.28		 	
668B:	 	i												
Somonauk	0 - 9				1.25-1.45	0.6-2	0.21-0.25		1.0-3.0	.43	.43	5	5	56
	9-26	0-10	55-78	22-35	1.35-1.55	0.6-2	0.14-0.24	3.0-5.9	0.2-1.0	.37	.37			
	26-55	15-70			1.45-1.65	0.6-2	0.12-0.19		0.0-0.5	.32	.32			
	55-60 	20-90	0-75	5-20	1.55-1.70	0.6-6	0.07-0.17	0.0-2.9	0.0-0.5	.20	.28		 	
675B:	 	i												
Greenbush	0-14	0-7	68-82	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	14-60	0-7	58-74	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	60-80	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49		 	
675C2:	 	i i									 			
Greenbush	0-6	0-7	68-82	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	6-46	0-7	58-74		1.30-1.35	0.6-2	0.18-0.20		0.5-1.0	.37	.37			
	46-60	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49		 	
679B:		İ										İ		
Blackberry	0-16				1.10-1.30	0.6-2	0.18-0.22		3.0-5.0	.28	.28	5	6	48
	16-47	1-10			1.20-1.40	0.6-2	0.18-0.20		0.2-1.0	.37	.37	ļ		!
	47-62				1.50-1.70	0.6-2	0.11-0.22		0.1-0.5	.32	.32	!		!
	62-70 	30-50	35-55 	5-20 	1.50-1.70	0.6-2	0.13-0.17	0.0-2.9	0.1-0.5	.37	.37 		 	
680B:		į			į į			į	į			į	į	
Campton		0-10			1.15-1.30	0.6-2	0.22-0.24		1.0-3.0	.43	.43	5	5	56
	8-45	0-10			1.30-1.50	0.6-2	0.18-0.20		0.0-1.0	.37	.37	!		!
	45-51	20-65			1.30-1.50	0.6-2	0.11-0.16		0.0-0.5	.32	.32	!		!
	51-80 	25-80	0-70	5-25 	1.55-1.75 	0.6-6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.28 		 	
712A:					į į			į		į		į		
Spaulding		1-7			1.05-1.25	0.6-2	0.21-0.24		4.0-6.0	.24	.24	5	4L	86
	22-38	1-7			1.20-1.50	0.6-2	0.18-0.22		0.5-2.0	.37	.37	1		
	38-44	1-7			1.25-1.55	0.6-2	0.17-0.22		0.5-1.0	.37	.37	1		
	44-80 	1-7 	66-79 	20-27	1.30-1.55	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49 		 	
	-													-

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available	1	Organic	Erosi	on fac	Lors	erodi-	1
and soil name		 			bulk density	bility (Ksat)	water capacity	extensi- bility	matter	 Kw	 Kf	 т	bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct			<u> -</u>		
715A:					 			 	 			 		
Arrowsmith	0-12	1-7	66-84	15-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
J	12-30	1-7	58-72	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37			
I	30-39	1-7	66-87		1.40-1.60	0.6-2	0.19-0.26		0.0-0.5	.43	.43			
	39-60	1-7	75-91	8-18	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.5	.55	.55	 	 	l I
732A:			İ				Ì							İ
Appleriver	0 - 8	0-10			1.25-1.45	0.6-2	0.22-0.24		1.0-3.0	.43	.43	4	5	56
ļ	8-35	0-10			1.30-1.50	0.6-2	0.18-0.20		0.5-1.0	.37	.37			
ļ	35-45	5-20			1.40-1.60	0.06-0.2	0.09-0.17	!	0.0-0.5	.32	.32			
	45-60	 	 		 	0.01-0.2		 			 	 	 	
732B:		į	İ				į	į	į	į	į	į	į	į
Appleriver	0-14		63-80		1.25-1.45	0.6-2	0.22-0.24	1	1.0-3.0	.43	.43	4	5	56
ļ	14-34	0-10			1.30-1.50	0.6-2	0.18-0.20	1	0.5-1.0	.37	.37			
l	34-58 58-60	5-20	30-60	37-50	1.40-1.60	0.06-0.2 0.01-0.2	0.08-0.17	3.0-5.9	0.0-0.5	.32	.32			
l l	58-60					0.01-0.2						 	 	l I
791A:		 												
Rush	0 - 4	0-15	58-88	12-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
J	4-11	0-15			1.25-1.40	0.6-2	0.21-0.23		0.5-1.0	.49	.49			
	11-38		51-78		1.35-1.50	0.6-2	0.18-0.20		0.5-1.0	.37	.37			
ļ	38-45	25-75			1.40-1.55	0.6-2	0.15-0.19	1	0.2-1.0	.28	.32	ļ		
ļ	45-60	85-98	0-13	2-6	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
791B:		 	 		 			 	 		 	 	 	
Rush	0 - 7	0-15	58-88	12-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	4	5	56
į	7-11	0-15	58-88	12-27	1.25-1.40	0.6-2	0.21-0.23	0.0-2.9	0.5-1.0	.49	.49	i	į	İ
į	11-35	0-15	51-78	22-34	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37	İ	į	İ
J	35-46	25-75	5-50	18-30	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.28	.32			
	46-60	85-98	0-13	2-6	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
792A:		 			 			 				 	 	
Bowes	0 - 9	0-10	63-82	18-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	2.0-4.0	.37	.37	4	6	48
j	9-13	0-10	65-85	15-25	1.35-1.55	0.6-2	0.21-0.24	0.0-2.9	0.5-1.5	.43	.43	ĺ	İ	ĺ
J	13-43	0-10	55-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
I	43-51	30-85	2-50		1.55-1.75	0.6-6	0.10-0.16	1	0.1-0.5	.28	.32			
	51-61	75-98	0-23	2-10	1.60-1.80	20-100	0.02-0.08	0.0-2.9	0.0-0.5	.02	.05		 	
792B:					ı 									
Bowes	0 - 7	0-10			1.30-1.50	0.6-2	0.22-0.25	1	2.0-4.0	.37	.37	4	6	48
	7-37	0-10			1.30-1.50	0.6-2	0.18-0.20		0.2-1.0	.37	.37		[
ļ	37-43	30-85	1		1.55-1.75	0.6-6	0.10-0.16		0.1-0.5	.28	.32	ļ	!	
	43-60	75-98	0-23	2-10	1.60-1.80	20-100	0.02-0.08	0.0-2.9	0.0-0.5	.02	.05	1	1	1

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	 Silt	Clay	 Moist	Permea-	 Available	 Linear	 Organic	Erosi	on fac	cors	Wind erodi-	Wind erodi
and soil name		 			bulk density	bility (Ksat)	water capacity	extensi- bility	matter	 Kw	 Kf	 T	bility group	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct	[
794G:					 			 	 		 	 		
Marseilles	0-10	0-15	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	3	5	56
İ	10-35	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-5.9	0.0-0.5	.37	.37	i	İ	i
	35-60	j j			į į	0.01-0.2		j	j	ļ	ļ	į	į	į
Northfield	0-3	 10-55	 30-70	10-20	 1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32	 .32	 2	 5	 56
i	3-16	15-60	25-60	15-27	1.55-1.65	0.6-2	0.14-0.22	0.0-2.9	0.2-1.5	.32	.32	i	İ	i
	16-60					0.2-2						İ	į	į
Ritchev	0 - 4	 5-30	 50-77	18-27	 1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32		 2	 6	 48
	4-18	5-30			1.35-1.60		0.18-0.20		0.2-1.5	.37	.37	i	-	
	18-60					0.06-0.6						İ	İ	İ
802B:								 	 		 	 		
Orthents, loamy	0-6	23-50	28-50	22-27	 1.70-1.75	0.2-0.6	0.18-0.22	0 0-2 9	0.5-2.0	.43	.43	5	6	48
oreness, round	6-60	20-52			1.70-1.80	0.2-0.6	0.12-0.20		0.2-1.0	.43	.43			
802D:								 	 					
Orthents, loamy	0-6	23-52	28-50	22-27	 1.70-1.75	0.2-0.6	0.18-0.22	1 0 0-2 9	0.5-2.0	.43	.43	 5	6	 48
or chercs, roamy	6-60	20-52			1.70-1.75	0.2-0.6	0.12-0.20		0.2-1.0	.43	.43			40
804D:								[[
Orthents, acid	0-3	2-20	25-63	35-55	1 1.20-1.40	0.01-0.2	0.12-0.16	3 0-5 9	0.5-2.0	.32	.32	5	4	86
01011011011, 4014	3-60	10-25	20-65		1.35-1.55	0.01-0.2	0.08-0.16		0.0-0.5	.28	.28		i -	
804G:		 						 	 			 		
Orthents, acid	0-3	2-20	25-63	35-55	1.20-1.40	0.01-0.2	0.12-0.16	3.0-5.9	0.5-2.0	.32	.32	5	4	86
	3-60	10-25	20-65	35-55	1.35-1.55	0.01-0.2	0.08-0.16	3.0-5.9	0.0-0.5	.28	.28	į		į
805B:					 			 	 		 	 		
Orthents, clayey	0 - 6	2-20	40-58	40-55	1.50-1.65	0.02-0.06	0.08-0.14	6.0-8.9	0.5-2.0	.43	.43	5	4	86
	6-60	2-30	10-60	35-60	1.60-1.90	0.02-0.06	0.03-0.10	6.0-8.9	0.2-1.0	.43	.43	į	į	į
814A:					 			 	 		 	 		
Muscatune	0-16	2-7	66-74	24-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
İ	16-22	2-7	58-73	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37			
İ	22-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	46-60	2-7	66-83	15-30	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.2	.49	.49			
Buckhart	0-15	 0-7	67-80	20-26	 1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	 5	 6	 48
j	15-67	0-7	58-75	25-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	67-80	0-7	66-82	18-27	1.35-1.45	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.49	.49	I	I	I

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic		on fac	LOIS	erodi-	
and soil name					bulk	bility	water	extensi-	matter				bility	bilit
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				 	
817A:														
Channahon	0-11	53-75			1.40-1.70	0.6-6	0.14-0.18		2.0-4.0	.20	.20	2	3	86
	11-16	35-75	7-50		1.50-1.70	0.6-6	0.12-0.19		0.2-1.0	.20	.20			
	16-19	60-95	0-35		1.55-1.70	2-20	0.05-0.12		0.0-0.5	.10	.15			
	19-60		 		 	0.2-2						 	 	
Hesch	0-12	53-75	7-40	5-15	1.40-1.70	0.6-6	0.14-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	86
	12-27	35-75	7-50	10-18	1.50-1.70	0.6-6	0.12-0.19	0.0-2.9	0.2-1.0	.24	.24			
	27-32	60-95	0-35	1-8	1.55-1.70	2-20	0.05-0.12	0.0-2.9	0.0-0.5	.15	.15			
	32-60					0.2-2							 	
817B:					ı 			! 						
Channahon	0 - 7	53-75	7-40	5-15	1.40-1.70	0.6-6	0.14-0.18	0.0-2.9	2.0-4.0	.20	.20	2	3	86
I	7-15	35-75	7-50	10-18	1.50-1.70	0.6-6	0.12-0.19	0.0-2.9	0.2-1.0	.20	.20			
	15-60					0.2-2							 	
Hesch	0-11	 53-75	7-40	5-15	 1.40-1.70	0.6-6	0.14-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	 86
İ	11-23	35-75	7-50	10-18	1.50-1.70	0.6-6	0.12-0.19	0.0-2.9	0.2-1.0	.24	.24	ĺ	ĺ	ĺ
	23-60					0.2-2								
818A:		 	 					 	 		 	 	 	
Flanagan	0-18	2-7	66-78	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	18-38	2-7	53-63	35-40	1.30-1.50	0.6-2	0.18-0.20	6.0-8.9	0.5-1.8	.37	.37	İ	İ	į
	38-45	3-15	50-72	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.1-0.5	.37	.37	ĺ	ĺ	ĺ
	45-49	15-30	45-65	20-27	1.40-1.60	0.6-2	0.16-0.20	0.0-2.9	0.1-0.5	.37	.37			
	49-60	30-50	28-50	10-27	1.65-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.1-0.5	.37	.37		 	
Catlin	0-11	 0-8	 65-82	18-27	 1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	2.5-4.0	.28	.28	 5	 6	48
	11-44	0-8	57-76	24-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.5	.37	.37	ĺ	ĺ	ĺ
	44-49	20-45	20-53	20-35	1.40-1.70	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	49-60	20-50	28-50	10-27	1.60-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37		 	
820E:		 			 		l I				 	 	 	
Hennepin	0-5	15-55	20-65	20-30	1.20-1.40	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	5-18	15-55	20-67	18-30	1.30-1.60	0.6-2	0.14-0.22	0.0-2.9	0.0-0.5	.32	.32	ĺ	ĺ	ĺ
	18-60	15-55	20-67	18-30	1.70-1.85	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.5	.37	.37			
Casco	0 - 6	 15-30	 43-67	18-27	 1.35-1.55	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.32	 .32	 3	 5	 56
i	6-22	20-60	5-62	18-35	1.55-1.65	0.6-2	0.09-0.19	3.0-5.9	0.2-1.0	.28	.32	İ	İ	İ
į	22-60	75-98	1-24	0-10	1.30-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05	į	į	į
820G:		 			 			 		 	 	 	 	
Hennepin	0-5	15-55	20-65	20-30	1.20-1.40	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	5-16	15-55			1.30-1.60	0.6-2	0.14-0.22		0.0-0.5	.32	.32	İ	İ	İ
i	16-60	15-55	20-67	18-30	1.70-1.85	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.5	.37	.37	i	į	į
i		i i	İ		i i		İ	İ	İ	İ	i	i	İ	i

Map symbol and soil name	Depth	Sand	Silt	Clay						1				
and soil name				Clay	Moist	Permea-	Available	1	Organic				erodi-	erodi
<u> </u> 					bulk	bility	water	extensi-	matter					bilit
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct			ļ.		
820G:														
Casco	0-7	 15-30	50-70	18-27	1.35-1.55	0.6-2	0.19-0.24	0 0-2 9	1.0-3.0	.32	.32	3	5	56
casco	7-15	25-50			1.55-1.65	0.6-2	0.09-0.19	t .	0.2-1.0	.28	.32		3	50
	15-60	85-99			1.30-1.70	20-100	0.02-0.04	1	0.0-0.5	.02	.05			
830.									[]					
Landfills							i					i		
į			į		į		į	į	į	į	į	į	į	į
864.			ļ							ļ		!	ļ	ļ
Pits, quarry		 						 	 					
865.			İ						İ			i		
Pits, gravel			ļ											
969E2:		 	 					 	 					
Casco	0-5	25-50	28-50	12-25	1.35-1.55	0.6-2	0.19-0.24	0.0-2.9	1.0-2.0	.32	.32	3	5	56
i	5-19	20-60	10-50	18-35	1.55-1.65	0.6-2	0.09-0.19	3.0-5.9	0.2-1.0	.28	.32	i	i	i
į	19-60	87-98	0-13	0-5	1.45-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05	İ	İ	
Rodman	0-6	 30-52	23-55	0_25	1.20-1.50	2-6	0.10-0.12	0 0-2 9	2.0-3.0	.20	.24		 8	0
KOdilian	6-10	30-32	0-55		1.10-1.50	2-6	0.10-0.12	t .	0.0-2.0	.24	.28	3	0	0
	10-60	85-98			1.60-1.70	20-100	0.02-0.04	t .	0.0-1.0	.02	.05			
0.007			ļ											
969F: Casco	0-4	 25-50	20 50	10 05	1.35-1.55	0.6-2	0.19-0.24		1.0-3.0	.32	.32		 5	56
Casco	4-15	25-50 20-60			1.55-1.65	0.6-2	0.19-0.24		0.2-1.0	.32	32	3	5	50
	15-60	20-60 87-98			1.45-1.70	20-100	0.03-0.13	1	0.2-1.0	.02	.05	1	1	
	13-60	67-36	0-13	0-5	1.45-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
Rodman	0-11	30-52	23-55	8-25	1.20-1.50	2-6	0.10-0.12	0.0-2.9	2.0-4.0	.20	.24	3	8	0
	11-14	40-80	0-55		1.10-1.50	2 - 6	0.09-0.12	0.0-2.9	0.0-2.0	.24	.28			
	14-60	85-98	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-1.0	.02	.05			
1103A:		 	 					 	 					
Houghton	0-12	i			0.20-0.35	0.2-6	0.35-0.45	i	70-99			3	2	134
	12-60	i	j		0.15-0.25	0.2-6	0.35-0.45		70-99			į	į	
1480A:								 	 					
Moundprairie	0 - 9	0-20	45-72	28-35	1.30-1.40	0.6-2	0.18-0.22	3.0-5.9	2.0-4.0	.28	.28	5	41.	86
	9-37	5-60	- 1		1.35-1.45	0.6-2	0.18-0.22		1.0-2.0	.32	.32	-		
į	37-60	5-40	25-70	15-35	1.35-1.50	0.6-2	0.16-0.22	3.0-5.9	2.0-3.0	.32	.32	İ	İ	İ
3073A:		 						 	 					
Ross	0-23	23-50	35-50	15-27	1.20-1.45	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
i	23-54	10-42			1.20-1.50	0.6-2	0.16-0.22	t .	0.5-1.0	.32	.32	i	İ	İ
i	54-60		35-55		1.35-1.60	0.6-6	0.05-0.18	1	0.1-0.5	.32	.32	i	İ	İ

Table 22.--Physical Properties of the Soils--Continued

Table 22.--Physical Properties of the Soils--Continued

Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available		Organic		on rac	LOIS	Wind erodi-	erodi
and soil name					bulk	bility	water	extensi-	matter	 V	 Kf		bility	
	In	Pct	Pct	Pct	density	(Ksat) In/hr	capacity In/in	bility Pct	Pct	Kw	KÎ	T 	group	index
		į į	į		į į			İ	į	į	į	į		į
3076A: Otter	0-27	0 15	F0 00	10 07	 1.10-1.25	0.6-2	0.22-0.24		3.0-7.0	.32	.32	 5	 6	 48
Otter	27-41	1 1	46-82		1.10-1.25	0.6-2	0.22-0.24		1.0-3.0	.32	.34	>	0	48
	41-65				1.30-1.55	0.6-2	0.17-0.22		0.5-2.0	.49	.49			
3082A:								 -						
Millington	0-26	5-30	50-75	20-27	 1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.32	.32	5	 4L	 86
	26-53	10-40			1.40-1.60	0.6-2	0.17-0.20		1.0-3.0	.32	.32	-		
į	53-60	15-60			1.50-1.70	0.6-2	0.14-0.20		0.1-2.0	.28	.28	į		
3107A:					 			 	 			 	 	
Sawmill	0-29	3-15	58-70	27-35	1.25-1.40	0.6-2	0.19-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
İ	29-48	5-20	45-68	27-35	1.30-1.45	0.6-2	0.17-0.20	3.0-5.9	1.0-3.5	.32	.32	ĺ	İ	ĺ
	48-60	5-25	40-70	25-35	1.35-1.50	0.6-2	0.17-0.20	3.0-5.9	0.2-2.0	.32	.32			
3321A:					 			 						
Du Page	0-17	15-40	50-80	18-27	1.40-1.60	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32	.32	5	4L	86
I	17-34	30-60	20-50	18-27	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.0-1.0	.32	.32			
	34-60	20-60	20-60	6-24	1.50-1.70	0.6-2	0.08-0.20	0.0-2.9	0.0-0.5	.32	.32		 	
3451A:		i i								i				
Lawson	0-14				1.20-1.50	0.6-2	0.22-0.24		3.0-5.0	.32	.32	5	5	56
ļ	14-33	0-15			1.20-1.50	0.6-2	0.18-0.22		2.0-4.0	.32	.32			
	33-80	5-40	30-77	18-30	1.45-1.65	0.6-2	0.18-0.20	3.0-5.9	0.2-2.0	.49	.49	 	 	l I
3480A:		i i	i		i i		İ			i	İ	i		İ
Moundprairie	0 - 9	0-20	45-75	28-35	1.30-1.40	0.6-2	0.18-0.22	3.0-5.9	2.0-4.0	.28	.28	5	4L	86
I	9-43	5-40	20-75	18-35	1.35-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	43-60	5-40	25-70	15-35	1.35-1.50	0.6-2	0.16-0.22	3.0-5.9	2.0-3.0	.32	.32			
3800A:								 						İ
Psamments	0-60	85-100	0-25	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.02	.02	5	1	220
	60-80	85-100	0-10	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.3	.02	.02			
7073A:								 						
Ross	0-20	10-50	40-80	15-27	1.20-1.45	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
I	20-36	1 1	35-70		1.20-1.50	0.6-2	0.16-0.22		1.0-3.0	.32	.32			
	36-60	30-90	5-60	5-25	1.35-1.60	0.6-6	0.05-0.18	0.0-2.9	0.5-2.0	.20	.24	 	 	
8073A:		į i												
Ross	0-32				1.20-1.45	0.6-2	0.19-0.24		3.0-5.0	.32	.32	5	6	48
	32-50				1.20-1.50	0.6-2	0.16-0.22		0.5-1.0	.32	.32	ļ	!	ļ
	50-60	20-60	35-55	5-25	1.35-1.60	0.6-6	0.05-0.18	0.0-2.9	0.1-0.5	.32	.32	1	1	1

										Erosi	on fac	tors	Wind	Wind
Map symbol	Depth	Sand	Silt	Clay	Moist	Permea-	Available	Linear	Organic				erodi-	erodi-
and soil name					bulk	bility	water	extensi-	matter				bility	bility
					density	(Ksat)	capacity	bility		Kw	Kf	T	group	index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8107A:	 							 			 			
Sawmill	0-26	2-15	58-70	27-35	1.25-1.45	0.6-2	0.19-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
	26-53	5-20	45-68	27-35	1.30-1.50	0.6-2	0.17-0.20	3.0-5.9	2.0-7.0	.32	.32			
	53-60	5-21	44-68	27-35	1.30-1.50	0.6-2	0.17-0.20	3.0-5.9	1.0-3.0	.28	.28			
8151A:	 	 			 			 						
Ridgeville	0-16	50-80	10-38	10-15	1.30-1.65	0.6-6	0.15-0.18	0.0-2.9	2.0-4.0	.17	.17	5	3	86
	16-40	45-70	8-43	12-22	1.45-1.70	0.6-6	0.15-0.19	0.0-2.9	0.2-1.0	.24	.24			
	40-60	60-95	0-37	3-10	1.55-1.90	2-20	0.05-0.13	0.0-2.9	0.0-0.5	.15	.15			
8404A:	 	 			 			 	 					
Titus	0-13	2-9	51-63	35-40	1.30-1.50	0.06-0.2	0.18-0.22	6.0-8.9	2.0-4.0	.28	.28	5	4	86
	13-68	2-15	40-63	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	68-80	15-30	40-65	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.32	.32			
8451A:	 	 			 			 	[
Lawson	0-13	0-15	58-85	15-27	1.20-1.50	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.32	.32	5	5	56
	13-53	0-15	55-85	15-30	1.20-1.50	0.6-2	0.18-0.22	0.0-2.9	2.0-4.0	.32	.32	1		1

0.6-2

0.2-2

0.18-0.20 3.0-5.9 0.2-2.0 .49 .49

.24 | 3 |

.32

--- | ---

48

0.22-0.24 | 0.0-2.9 | 4.0-6.0 | .24 |

|0.15-0.19| 0.0-2.9 | 0.2-1.5 | .32 |

53-80 | 5-40 | 30-77 | 18-30 | 1.45-1.65 | 0.6-2

0-12 | 20-45 | 28-60 | 18-27 | 1.30-1.45 | 0.6-2

--- | ---

12-36 | 20-50 | 20-55 | 18-35 | 1.40-1.55 |

36-60 | --- | --- |

8516A:

Faxon-----|

Table 22.--Physical Properties of the Soils--Continued

Table 23.--Chemical Properties of the Soils
(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation- exchange capacity	cation-		Calcium carbon-
			capacity		
	In	meq/100 g	meq/100 g	рН	Pct
220.			İ	İ	
23B: Blount	0-6	13-20	l 	 5.1-7.3	0
2204110	6-10	7.0-16		5.1-7.3	0
	10-23	17-26		4.5-6.5	0
	23-34	13-24		6.1-7.8	0-25
	34-60	13-21		7.4-8.4	15-35
51A:			 	 	
Muscatune	0-16	16-32		6.1-7.3	0
	16-22	16-27		5.6-7.3	0
	22-46	17-31		5.6-7.3	0
	46-60	9.0-22		6.6-7.8	0-15
60C2:		1	 	 	
La Rose	0-7	13-20		6.1-7.8	0
	7-21	13-20		6.1-7.8	0-20
	21-60	7.0-14		7.4-8.4	15-40
60D2:			 	 	1
La Rose	0-7	13-20	 	6.1-7.8	0
İ	7-20	13-20		6.1-7.8	0-20
	20-60	7.0-14		7.4-8.4	15-40
C12					
61A: Atterberry	0-9	11-28	l I	 6.1-7.3	0
Accerberry	9-17	9.0-24		5.6-6.5	0
İ	17-48	16-29		5.1-6.0	0
	48-60	9.0-23		5.6-7.8	0-8
C1D.			İ	İ	
61B: Atterberry	0-9	11-28	l 	 6.1-7.3	0
	9-13	9.0-24		5.6-6.5	0
İ	13-48	16-29		5.1-6.0	0
	48-60	9.0-23		5.6-7.8	0 - 8
67A:		1			
Harpster	0-18	27-40	 	 7.9-8.4	15-40
L	18-41	18-27		7.4-8.4	5-40
	41-56	9.0-23		7.9-8.4	5-40
	56-60	4.0-16		7.9-8.4	10-40
68A:		1	 	 	1
Sable	0-19	26-33	 	5.6-7.3	0
İ	19-23	20-29		5.6-7.3	0
	23-47	15-23		5.6-7.8	0
	47-60	12-18		6.6-8.4	0-30
86B:			 	 	
Osco	0-14	18-25		5.1-7.3	0
j	14-55	15-23		5.1-6.5	0
	55-60	12-18		5.6-7.8	0-15
9602			 	 	
86C2:		1	 -		
Osco	0 - 9	18-25		5.1-7.3	0
Osco	0-9 9-34	18-25 15-23	 	5.1-7.3 5.1-6.5	0

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	exchange	Soil reaction 	Calcium carbon- ate
	In	 meg/100 g	capacity meq/100 g	рн	Pct
		meq/100 g			
87A:					
Dickinson	0 - 8	15-20		5.6-7.3	0
	8-20 20-31	7.0-17	 	5.6-7.3	0
	31-36	9.0-17	 	5.1-6.5	0
	36-60	0.0-10		5.6-6.5	0
87B:			 	 	1
Dickinson	0 - 9	10-20		5.6-7.3	0
I	9-17	7.0-17		5.6-7.3	0
	17-33	9.0-17		5.1-6.5	0
	33-41	0.0-10		5.1-6.5	0
	41-60	0.0-10	 	5.6-6.5 	0
87C2:		15.00			į
Dickinson	0-11 11-29	15-20		5.6-7.3	0
	29-35	15-20 5.0-10	 	5.1-6.5	0
	35-60	5.0-10		5.6-6.5	0
88B: Sparta	0-14	2.0-12	 	 5.1-7.3	0
	14-47	1.0-6.0		5.1-7.3	0
į	47-72	1.0-9.0		5.1-6.0	0
88D:			 	 	
Sparta	0 - 8	2.0-12		5.1-7.3	0
İ	8-17	2.0-12		5.1-7.3	0
	17-33	1.0-6.0		5.1-7.3	0
	33-72	1.0-9.0	 	5.1-6.0	0
91A:		İ			İ
Swygert	0-12	20-31		5.6-7.3	0
	12-26	20-31		5.6-7.3	0
	26-51 51-60	10-25	 	7.4-8.4	2-20
	31 00		 	7.5 0.1	
91B:	0-11	20-31	 	 5.6-7.3	0
Swygert	11-23	20-31	 	5.6-7.3	0
	23-45	10-25		7.4-8.4	2-20
	45-60	9.0-20		7.9-8.4	15-30
91B2:			 	 	
Swygert	0-7	20-31	i	5.6-7.3	0
I	7-30	20-31		5.6-7.3	0
	30-48	10-25		7.4-8.4	2-20
	48-60	9.0-20	 	7.9-8.4	15-30
91C2:		į	ĺ	İ	į
Swygert	0-7	20-31		5.6-7.3	0
	7-18	20-31		5.6-7.3	0
	18-36 36-60	10-25 9.0-20	 	7.4-8.4	2-20 15-30
01.00					
91C3: Swygert	0-6	 17-21	 	 5.6-7.3	0
-5.	6-24	21-29		6.6-8.4	2-10

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	'	Soil reaction 	Calcium carbon- ate
	In	meg/100 g	meq/100 g	pH	Pct
				İ	İ
103A:					
Houghton	0-11 11-60	140-200	 	5.1-7.3	0
104A:		ļ			
Virgil	0-7	13-24		6.1-7.8	0
	7-13 13-49	9.0-17	 	5.1-7.8	0
	49-58	9.0-19		5.6-7.8	0-10
j	58-60	6.0-19	i	6.1-8.4	0-20
		!			
105A: Batavia	0-9	16-22	 	 5.6-7.3	0
bacavia	9-41	12-23		5.1-6.5	0
	41-60	9.0-19		5.6-7.3	0
j		İ	İ	j	İ
105B:					
Batavia	0-9 9-12	16-22	 	5.6-7.3	0
	12-45	10-18	 	5.1-6.5	0 0
	45-60	9.0-19		5.6-7.3	0
j		İ	İ	j	į
105C2:					
Batavia	0-10	16-22		5.6-7.3	0
	10-50 50-60	12-23	 	5.6-7.3	0 0
125A:		İ	İ	İ	İ
Selma	0 - 6	20-28		6.1-7.8	0
	6-13 13-44	22-31	 	6.1-7.8	0 0 - 20
	44-80	7.0-20		6.6-8.4	0-20
131B:					
Alvin	0-8	7.0-11		4.5-7.3	0
	8-11 11-25	6.0-10 9.0-12		4.5-7.3	0 0
	25-80	2.0-7.0		5.1-8.4	0-25
131C2:					
Alvin	0-7	7.0-11		5.0-7.3	0
	7-42 42-80	9.0-12		5.0-7.3	0 0 - 25
	12-00	2.0-7.0		3.1-0.4	0-23
132A:		İ	İ	j	į
Starks	0-10	12-22		5.1-7.3	
	10-14	10-18		5.1-7.3	1
	14-31 31-43	16-23 6.0-19	 	5.1-6.5	
	43-60	3.0-19		6.1-8.4	0-10
					İ
134A:					
Camden	0-7	10-20		5.1-7.3	0
	7-12	10-20		5.1-7.3	0
		'	i	5.1-7 3	i n
	12-26 26-53	13-22	i	5.1-7.3	0

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	!	 Soil reaction	Calcium carbon- ate
			capacity	 	ale
	In	·	meq/100 g	рН	Pct
1240					
134B: Camden	0-9	10-20	 	 5.1-7.3	l l 0
	9-15	10-20		5.1-7.3	0
i	15-34	13-22	i	5.1-7.3	0
I	34-40	10-19		5.1-7.3	0
	40-60	3.0-12		5.1-8.4	0-25
134C2:			 	 	1
Camden	0-7	12-22		5.1-7.3	0
i	7-34	19-27	i	5.1-7.3	0
I	34-43	15-23		5.1-7.3	0
	43-80	4.1-12		6.1-7.8	0-25
134D2:			 	 	l I
Camden	0-7	11-29		5.1-7.3	0
i	7-34	15-29	i	5.1-7.3	0
İ	34-43	9.0-20		5.1-7.3	0
	43-80	2.0-10		6.1-7.8	0-25
134D3:			 	 	
Camden	0-7	15-20	 	5.1-7.3	0
	7-37	15-20	15-20	4.5-6.0	0
i	37-53	15-20		5.1-6.5	0
İ	53-60	5.0-10		5.1-7.3	0
104=					
134F: Camden	0-9	15-20	 	 5.1-7.3	0
June 1	9-31	15-20	15-20	4.5-6.0	0
i	31-40	15-20		5.1-6.5	0
	40-60	5.0-10		5.1-7.3	0
146A:			 	 	
Elliott	0 - 6	16-32	 	5.6-7.3	0
	6-11	27-40	i	5.6-7.3	0
İ	11-16	17-38	i	6.1-7.3	0
I	16-41	13-24		6.6-7.8	0-15
	41-60	11-22		7.4-8.4	10-35
146B:		 	 	 	
Elliott	0-9	16-32	 	5.6-7.3	0
i	9-13	27-40	i	5.6-7.3	0
I	13-17	15-36		6.1-7.3	0
	17-35	13-24		6.6-7.8	
	35-60	11-22		7.4-8.4	10-35
146B2:			 	 	l I
Elliott	0 - 8	27-40	i	5.6-7.3	0
İ	8-14	15-36	i	6.1-7.3	0
I	14-27	13-24		6.6-7.8	0-15
	27-60	11-22		7.4-8.4	10-35
147B2:		 	 	 	1
Clarence	0 - 8	17-28		5.6-7.3	0
İ	8-35	25-32	i	5.6-8.4	0-20
	35-60	20-31		7.4-8.4	5-30
148A:			 	 	1
Proctor	0-11	16-24	 	5.1-7.8	0
	11-27	16-25		5.6-7.3	
İ	27-44	11-23		5.6-7.3	0
	44-73	3.0-16		6.1-7.8	0-10
	11 //				031

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth 	Cation- exchange capacity		Soil reaction	Calcium carbon-
		capacity	capacity	 	200
	In	meq/100 g	meq/100 g	pH	Pct
]			
148B:					
Proctor	0-11 11-28	17-24 16-25	 	5.1-7.8	0
	28-33	11-21		5.6-7.3	0
	33-60	3.0-13		5.6-7.8	0-10
		İ	İ	İ	İ
148C2:					
Proctor	0-8 8-32	15-23 16-25		5.1-7.8	0
	32-48	15-23		5.6-7.3	0
	48-60	4.0-12		6.1-7.8	0-10
j		İ	İ	j	İ
149A:					
Brenton	0-12	18-26	 	5.6-7.3	0
	12-28 28-44	15-23 12-19	 	5.6-7.3	0 0 - 5
	44-60	3.0-19		6.6-8.4	0-20
151A:					
Ridgeville	0-16	10-17		5.6-7.3	0
	16-40 40-60	7.0-13		5.6-6.5	0 0
	40-60	2.0-7.0		0.1-7.3	0
151B:		i		<u> </u>	İ
Ridgeville	0-14	10-17		5.6-7.3	0
	14-56	7.0-13		5.6-6.5	0
	56-60	2.0-7.0		6.1-7.3	0
152A:				 	
Drummer	0-14	24-35		5.6-7.8	0
İ	14-41	13-25		5.6-7.8	0
	41-47	9.0-21		6.1-8.4	0-20
	47-60	6.0-20		6.6-8.4	0-40
154A:		l	 	 	
Flanagan	0-18	16-32		5.6-7.3	0
	18-38	22-35	i	5.6-7.3	0
İ	38-45	16-27	j	5.6-7.3	0
	45-49	6.0-18		6.1-7.8	0-10
	49-60	4.0-16		7.4-8.4	15-40
171A:			 	 	
Catlin	0-11	17-24		5.1-7.3	0
i	11-44	14-23	j	5.1-7.3	
	44-49	12-22		6.1-7.8	0-5
	49-60	4.0-16		7.4-8.4	5-25
171B:		l I	 	 	
Catlin	0-11	14-30		6.1-7.3	0
	11-16	22-29		5.6-7.3	1
	16-41	21-28		5.6-7.3	0
	41-45	11-22		7.4-8.4	'
	45-60	4.0-16		7.4-8.4	15-40
171B2:			 	 	
Catlin	0-8	14-28		6.1-7.3	0
	8-41	17-31		6.1-7.3	1
	41-47	12-21		7.4-7.8	0-5
	47-60	11-21		7.4-8.4	15-40

Table 23.--Chemical Properties of the Soils--Continued

 In	capacity 			ate
In		capacity	İ	j
	meq/100 g	meq/100 g	pН	Pct
I				
 0-9	14-28	 	6.1-7.3	0
9-40	17-31	l	5.6-6.5	0
40-50	16-27		6.1-7.3	0
50-55	11-22	i	6.6-7.8	0-5
55-60	10-22		7.4-8.4	15-40
0-5	14-28		6.1-7.3	0
5-44	16-27		6.1-7.3	0
44-49	11-22		6.6-7.8	0-5
49-60	10-22	 	7.4-8.4	15-40
			ĺ	į
	1			0
			1	0
	1		1	0-5
34-60	6.0-16	 	7.4-0.4	1-30
	1			
				0
	1	!	1	0-5
58-62	2.0-10		6.6-7.8	0-15
	į	į	į	į
0.14	17.26	 		0
	1	 		0
	1	l	1	0
60-72	6.0-13		5.6-8.4	0-20
 0-15	17-26	 	6.1-7.3	0
15-45	13-26	i	5.1-7.3	0
45-55	6.0-19		5.6-7.8	0
55-72	6.0-13		5.6-8.4	0-20
		 	 	l
0-8	17-26		6.1-7.3	0
8-41	15-23		5.1-7.3	0
41-53	9.0-20		5.6-7.8	0
53-60 	6.0-13	 	5.6-8.4	0-20
		İ	İ	İ
			1	
	1		1	!
	1	!		1
43-50 50-65	11-19 3.0-19	 	5.6-7.8	
		į		į
 0.0	140-190	 	 7 4-0 4	5-40
0-8 8-60	100-180	 	7.4-8.4	
		į	į	į
 0-7	15-24	 	 5.1-7.3	0
7-24	15-23		5.1-7.3	
24-53	11-20		5.1-7.8	
53-80	6.0-19	j	5.6-8.4	0-20
	40-50 50-55 55-60 0-5 5-44 44-49 49-60 0-6 62-4 24-34 34-60 0-16 16-49 49-58 58-62 0-14 14-49 49-60 60-72 0-15 15-45 45-55 55-72 0-8 8-41 41-53 53-60 0-14 14-19 19-43 44-19 19-43 43-50 50-65 0-8 8-60 0-7 7-24 24-53	40-50	40-50	40-50

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		1	Calcium carbon- ate
	In	meq/100 g	meq/100 g	рН	Pct
		ļ			!
223B: Varna	0-12	15-22	 	 5.6-7.3	0
Varna	12-30	18-28	 	5.6-7.3	0
i	30-48	15-25		7.4-8.4	0-15
j	48-60	13-21	i	7.9-8.4	5-30
223B2:			 	 	
Varna	0-7	14-20	l 	5.6-7.3	0
	7-26	18-28		5.6-7.3	0
İ	26-38	15-25	i	7.4-8.4	0-15
	38-60	13-21		7.9-8.4	5-30
223C2:			 	 	
Varna	0 - 9	14-20	i	5.6-7.3	0
	9-29	18-28		5.6-7.3	0
	29-50	15-25		7.4-8.4	0-15
	50-60	13-21		7.9-8.4	5-30
223C3:			 	 	
Varna	0 - 6	14-22		5.6-7.3	0
	6-16	18-28		5.6-7.3	0
	16-19	15-25		7.4-8.4	0-15
	19-60	13-21	 	7.9-8.4	5-30
223D2:				! 	
Varna	0 - 9	14-20		5.6-7.3	0
	9-31	18-28		5.6-7.3	0
	31-36	15-25		7.4-8.4	0-15
	36-60	13-21	 	7.9-8.4	5-30
223D3:		İ	İ		İ
Varna	0 - 8	18-25		5.6-7.8	0
	8-20	22-32		5.6-7.8	0-15
	20-60	17-25	 	6.6-8.4 	5-30
228B:		İ	İ		İ
Nappanee	0-4	12-20		5.1-7.3	0
	4-9	9.0-16		5.1-7.3	0
	9-23 23-46	23-32	 	5.6-7.8	0 10-30
	46-60	15-24		7.9-8.4	15-35
			ĺ		İ
228C2: Nappanee	0-5	15-24	 	 5.1-7.3	0
Nappanee	5-8	13-20	 	5.1-7.3	0
	8-23	23-32		5.6-7.8	0
İ	23-27	20-29	i	7.4-8.4	10-30
	27-80	15-24		7.9-8.4	15-35
228C3:			 		
Nappanee	0-7	11-25		5.1-7.3	0
	7-16	14-29	i	5.6-7.8	0
	16-20	11-19		7.4-8.4	10-30
	20-60	9.6-17		7.9-8.4	15-35
232A:			! 	! 	
Ashkum	0-12	22-38		5.6-7.3	0
	12-29	22-39		6.1-7.8	0-5
	29-54	13-24		6.6-7.8	0-15
	54-60	11-22		7.4-8.4	10-25

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	,	Effective cation- exchange		Calcium carbon- ate
			capacity		
	In	meq/100 g	meq/100 g	pН	Pct
233A:			 	 	
Birkbeck	0 - 8	11-28		5.1-7.3	0
j	8-11	9.0-24		5.1-7.3	0
I	11-46	16-29		5.1-7.3	0
I	46-56	9.0-19		6.1-7.8	0-5
	56-60	8.0-16		7.4-8.4	15-25
233B:			 	 	
Birkbeck	0-4	13-24	 	5.6-7.3	0
	4-9	9.0-24	7.9-14	4.5-6.5	0
İ	9-54	16-29	13-17	4.5-7.3	0
I	54-60	7.0-17		6.1-7.8	0-5
	60-68	4.0-16		7.4-8.4	15-40
00000					1
233C2: Birkbeck	0-9	11-20	 	 5.1-7.3	 0
PITYDECK	0-9 9-42	15-23	 	4.5-7.3	0
l I	42-48	12-19	l	5.6-7.8	0-5
i	48-60	10-19		6.6-8.4	0-20
į		İ	İ		i
234A:		İ	ĺ		İ
Sunbury	0 - 8	18-29		5.6-7.3	0
	8-15	11-20		5.6-7.3	0
ļ	15-36	22-35		5.6-7.3	0
ļ	36-43	16-27		6.1-7.8	0
	43-47 47-72	8.0-18 8.0-16	 	6.1-7.8 7.4-8.4	0-10
 	47-72	8.0-16	 	/.4-0.4 	10-40
235A:		İ			i
Bryce	0-13	30-42		5.6-7.8	0
I	13-45	23-33		6.1-7.8	0-5
	45-58	21-33		7.4-8.4	0-15
ļ	58-66	12-34		7.4-8.4	10-25
236A:		I I	l I	 	
Sabina	0-8	17-23	l I	 5.6-7.3	0
	8-12	14-20		5.1-7.3	0
į	12-43	25-32	i	4.5-7.3	0
j	43-50	15-27		6.6-7.8	0-5
I	50-80	11-24		7.4-8.4	0-25
238A:	0 17	22 44			
Rantoul	0-17 17-40	32-44		6.1-7.3 6.1-8.4	
ļ I	40-60	21-35	 	7.4-8.4	
İ					
241C3:		İ	İ	İ	į
Chatsworth	0 - 5	25-32		6.1-8.4	0-20
	5-16	21-31		6.6-8.4	0-25
	16-60	21-31		7.4-8.4	5-30
24102.			 	 	1
241D3: Chatsworth	0-2	21-32	 	 6.1-8.4	0-20
CIIACSWOI CII	2-22	18-31	ı	6.6-8.4	
ļ	22-60	17-26	 	7.4-8.4	
	00				5 55
241E3:		j			į
Chatsworth	0 - 7	21-32	i	6.1-8.4	0-20
ĺ	7-21	18-31		6.6-8.4	0-25
		17-26		7.4-8.4	5-30

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	1		1	Calcium carbon- ate
	l In	 mag/100 g	meq/100 g	 	Pct
	<u>111</u>	med/100 g	med/100 g	pH 	PCC
241F:		i			İ
Chatsworth	0-4	15-24		6.1-8.4	0-15
	4-24	18-31		6.6-8.4	0-25
	24-60	17-26		7.4-8.4	5-30
241G:	 		 	 	
Chatsworth	0-5	15-24	 	6.1-8.4	0-15
İ	5-20	18-31	i	6.6-8.4	0-25
İ	20-60	17-26		7.4-8.4	5-30
242A: Kendall	 0-7	10-26	 	 5.1-7.3	 0
Kendaii	0-7 7-11	8.0-20	 	5.1-7.3	0
i	11-51	13-18	 13-17	4.5-7.3	0
i	51-58	9.0-19		5.1-7.8	0-15
İ	58-80	3.0-10		7.4-8.4	0-20
		ļ			
243A: St. Charles	 0-9	14.22	 	 5.1-7.8	 0
St. Charles	0-9 9-51	14-22 15-22	 	4.5-7.3	0
i	51-60	9.0-19	 	5.1-7.3	0
j					
243B:		İ	ĺ		İ
St. Charles	0-8	14-22		5.1-7.8	0
	8-50	15-22		4.5-7.3	0
	50-60	9.0-19		5.1-7.3	0
243C2:	 		! 	 	
St. Charles	0-8	14-22		5.1-7.8	0
İ	8-41	15-22	i	4.5-7.3	0
	41-60	9.0-19		5.1-7.3	0
244A:	İ		 	İ	
Hartsburg	 0-17	27-40	 	 6.1-7.8	0-5
nar obbarg	17-34	17-31	 	6.6-8.4	0-25
İ	34-60	9.0-23	i	7.4-8.4	15-40
278A:					
Stronghurst	0-7 7-11	14-22 11-17	 	5.1-7.3	0 0
	11-47	17-23	 	5.1-7.3	0
	47-60	12-17		5.6-7.8	0-15
i	İ	İ	j	İ	į
278B:					
Stronghurst	0-10	14-22		5.1-7.3	0
	10-48 48-60	17-23 12-17		5.1-7.3	0 0-15
	40-00	12-17	 	3.0-7.0	0-15
279B:				<u> </u>	
Rozetta	0-7	10-22	i	5.1-7.3	0
	7-11	7.0-17		4.5-7.3	0
	11-55	16-22		4.5-6.0	0
	55-60	12-17		5.6-7.8	0-15
280C2:	 		 	 	
Fayette	0-8	18-25		5.1-7.3	0
-	8-64	15-22		4.5-6.0	0
	64-80	15-20		5.1-7.8	0-15
	64-80	1	 	5.1-7.8	0 -

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	!	Soil reaction 	Calcium carbon- ate
	In	 meq/100 g	meq/100 g	pH	Pct
į				İ	į
290A:	0-11	14.00	l I		
Warsaw	11-28	14-23	 	5.6-7.3	0
i	28-32	9.0-22	l	6.1-8.4	0-10
ļ	32-80	1.0-7.0		7.9-8.4	10-30
290B:					
Warsaw	0-10 10-24	14-23	 	5.6-7.3	0
ļ	24-34	9.0-22	 	6.1-8.4	0-10
	34-60	1.0-7.0		7.9-8.4	10-30
į		İ			İ
290C2:			!		
Warsaw	0-8	13-21		5.6-7.3	0
ļ	8-16 16-27	9.0-22	 	5.1-6.5	0 0-10
	27-60	1.0-7.0		7.4-8.4	10-30
į		j	j	İ	i
293A:					
Andres	0-11	10-22		5.6-7.3	0
ļ	11-26 26-50	11-22		6.1-7.8	0-5
ļ	26-50 50-60	13-24	 	6.6-8.4 7.4-8.4	0-15
İ	30-00	11-22	 	/.4-0.4 	13-30
293B:		İ	İ		i
Andres	0-10	10-22		5.6-7.3	0
ļ	10-36	11-22		6.1-7.8	0-5
	36-47	13-24		6.6-8.4 7.4-8.4	0-15
ļ	47-60	11-22	 	/.4-8.4 	15-30
294B:		i		 	
Symerton	0-15	10-22	j	5.6-7.3	0
I	15-19	15-27		5.6-7.3	0
	19-35	8.0-22		5.6-7.8	0-5
l l	35-39 39-60	9.0-23	 	7.4-8.4	0-15
 	39-00	9.0-23	 	/.4-0.4 	5-30
294C2:		i		! 	
Symerton	0 - 8	9.0-20		5.6-7.3	0
I	8-31	8.0-22		5.6-7.8	0-5
	31-40	9.0-23		7.4-8.4	0-15
ļ	40-60	9.0-23	 	7.4-8.4	5-30
295A:		I I	 	 	
Mokena	0-5	15-24	i	5.6-7.3	0
İ	5-15	13-21		5.6-7.3	0
Į.	15-38	13-22		6.1-7.8	
	38-42	20-31	 	6.1-8.4	
	42-60	20-31	 	7.4-8.4	5-30
295B:					
Mokena	0-15	15-24		5.6-7.3	0
į	15-31	13-22		6.1-7.8	
	31-44	20-31		6.1-8.4	1
	44-80	20-31	 	7.4-8.4	5-30
298B:			 	! 	
Beecher	0-7	17-24		5.1-7.3	0
į	7-24	15-33		4.5-7.3	0
İ	24-36	13-24		6.1-7.8	0-15
	36-60	11-22		7.4-8.4	10-35

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	exchange	Effective cation- exchange	reaction	Calcium carbon-
		:	capacity		
	In	meq/100 g	meq/100 g	рН	Pct
311B:				 	
Ritchey	0-5	12-22		5.6-7.8	0
	5-9	10-16		5.6-7.8	0
	9-17 17-60	15-23	 	6.6-8.4	0-20
	17-00				
314A:			ĺ	ĺ	İ
Joliet	0-15 15-19	19-27 14-24		6.1-8.4	0-20
	19-60				
315B: Channahon	0-11	16-24	 	 6.1-7.8	0
	11-18	15-24		6.1-8.4	0-20
	18-60				
317A:			 	 	
Millsdale	0-18	21-32		6.1-7.3	0
	18-36	17-28		6.1-8.4	0-15
	36-60			 	
318B:				! 	
Lorenzo	0 - 9	13-22		5.6-7.3	0
	9-18 18-60	10-20	 	5.6-7.8	0-20 15-40
	10-00	0.0-4.0		7.4-0.4	13-40
318C2:					
Lorenzo	0-7 7-16	13-20		5.6-7.3	0 0 - 35
	16-60	0.0-4.0		7.4-8.4	15-40
320B:					
Frankfort	0-8	14-22	 	5.6-7.3	0
j	8-12	15-20	i	5.6-7.3	0
	12-32	23-32		6.1-7.8	0
	32-37 37-60	20-29 17-26		7.4-8.4	5-15 15-30
320C2:	0-7	15.04			
Frankfort	7-28	17-24	 	5.6-7.3	0
	28-32	20-29		7.4-8.4	5-15
	32-60	17-26		7.9-8.4	15-30
325B:				 	
Dresden	0-7	13-22	i	5.6-7.3	0
	7-16	14-20		5.6-7.3	:
	16-30 30-60	10-16	 	5.6-7.8	1
325C2:		12.00			
Dresden	0-9 9-15	13-20 14-20	 	5.6-7.3	:
	15-32	10-16		5.6-7.8	
	32-60	0.0-4.0		7.4-8.4	15-40
327B:			 	 	
Fox	0-4	11-21		5.1-7.3	0
İ	4-7	9.0-17		5.1-7.3	
	7-13	11-22		5.1-7.3	
	13-28 28-60	10-22		5.6-7.8	0-30
	••		i	, 	5

Table 23.--Chemical Properties of the Soils--Continued

In meq/100 g meq/100 g pH Pct	Map symbol and soil name	Depth	capacity	cation- exchange		Calcium carbon- ate
327C2: Fox		T-n	·		 	Dat
Fox		ın	med/100 g	med/100 g	pn 	PCT
	327C2:		İ			İ
12-24 10-22 5.6-7.8 0-30	Fox	0 - 4	11-19		5.1-7.3	0
327D2: FOX			1			0
327D2: Fox			1			
Fox		24-60	0.0-3.0		7.4-8.4	5-45
Fox	32702:		1	l I	 	
8-28		0-8	11-19		 5.1-7.3	0
330A: Peotone	İ	8-28		i	5.6-7.8	0-30
Peotone	İ	28-60	0.0-3.0	i	7.4-8.4	5-45
Peotone						
13-50				!		
	Peotone			!		!
344A: Harvard			1			1
Harvard		30-60	15-26	 	0.0-0.4	0-15
9-36	344A:		i	İ	 	
36-56 9.0-22 5.6-7.8 0-5		0-9	16-24	i	5.1-7.8	0
344B: Harvard		9-36	15-23	i	5.1-7.3	0
344B: Harvard	j	36-56	9.0-22		5.6-7.8	0-5
Harvard		56-60	3.0-19		5.1-8.4	0-20
Harvard			!	!		
9-30		0.0	16.04			
30-56 9.0-22 5.6-7.8 0-5 56-69 3.0-19 5.1-8.4 0-20 344C2:	Harvard		!	!		!
344C2: Harvard			!	!		1
344C2: Harvard	i		1			!
Harvard				İ		
T-32	344C2:		İ	j	İ	į
32-40	Harvard	0-7	16-22		5.1-7.8	0
40-60 3.0-19 5.1-8.4 0-20		7-32	15-23		5.1-7.3	0
356A: Elpaso			1	!		!
Elpaso		40-60	3.0-19		5.1-8.4	0-20
Elpaso	3567.		l I	l I	 	
21-44		0-21	26-35	 	 5 6-7 3	l 0
	119450			!		!
375A: Rutland				!		!
Rutland	İ	69-80	9.0-20	j	7.4-8.4	5-30
Rutland						
14-36			!	!		
36-44 12-22 6.1-7.8 0-10 44-52 22-32 6.6-8.4 0-15 52-60 20-34 7.4-8.4 5-30 37-5B: Rutland	Rutland		1			1
44-52				!	:	:
				!		
375B: Rutland				!		
Rutland		02 00	20 01	İ		
13-40 21-31 5.1-7.8 0-5 40-50 22-32 6.6-8.4 0-15 50-60 20-34 7.4-8.4 5-30	375B:		İ	İ	İ	İ
40-50 22-32 6.6-8.4 0-15 50-60 20-34 7.4-8.4 5-30	Rutland	0-13	22-28		5.1-7.3	0
50-60 20-34 7.4-8.4 5-30		13-40	21-31			
375B2:				!		!
Rutland 0-9 20-26 5.1-7.3 0 9-37 21-31 5.1-7.8 0-5 37-46 22-32 6.6-8.4 0-15		50-60	20-34		7.4-8.4	5-30
Rutland 0-9 20-26 5.1-7.3 0 9-37 21-31 5.1-7.8 0-5 37-46 22-32 6.6-8.4 0-15	375B2•			 	 	1
9-37 21-31 5.1-7.8 0-5 37-46 22-32 6.6-8.4 0-15		0 - 9	20-26	 	5.1-7.3	l 0
37-46 22-32 6.6-8.4 0-15				!		
	j			!		
						5-30

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth		-	!	Calcium carbon- ate
	In	 meg/100 g	meq/100 g	рн	Pct
				-	
388B:	0.14	17.00	 		
Wenona	0-14 14-37	17-23	 	5.1-7.3	0 0 - 5
	37-50	26-43		6.6-8.4	0-15
	50-60	26-34	i	7.4-8.4	5-30
388B2:			 	 -	
Wenona	0-9	17-23	 	5.1-7.3	0
j	9-42	26-33		5.1-7.8	0-5
İ	42-52	26-43	i	6.6-8.4	0-15
	52-60	26-34		7.4-8.4	5-30
388C2:			 	 	
Wenona	0 - 6	22-32	i	5.1-7.3	0
	6-45	26-33		5.1-7.8	0-5
	45-54	26-43		6.6-8.4	0-15
	54-60	26-34	 	7.4-8.4	5-30
397F:			! 	! 	
Boone	0-6	1.0-4.0		5.1-6.5	0
	6-15	1.0-3.0		4.5-5.5	0
	15-23 23-60	1.0-2.0		5.1-6.5	0
	23-60		 	 	
413B:					
Gale	0 - 4	13-23		4.5-7.3	0
	4-7	10-22		4.5-6.5	0
	7-30	16-27		4.5-6.5	0
	30-37 37-60	1.8-12	 	4.5-6.0	0
İ		j	İ	İ	į
413C2: Gale	0-6	13-23	 	 4.5-7.3	 0
Gare	6-9	10-22	l	4.5-6.5	0
	9-31	16-27		4.5-6.5	0
i	31-38	1.8-12	i	4.5-6.0	0
	38-60				
435A:			 	 	
Streator	0-13	23-33		6.1-7.3	0
	13-42	27-35		6.1-7.8	0-5
	42-68	26-43		6.6-8.4	0-15
	68-80	26-43	 	7.4-8.4	5-30
448B:		į	į	į	į
Mona	0-11	16-26		6.1-7.8	'
	11-39 39-44	15-22 24-31	 	5.6-7.8	
	44-60	24-31		7.4-8.4	1
		į	į	į	į
448C2: Mona	0-7	16-26	 	 6.1-7.8	0
	7-33	15-22		5.6-7.8	'
	33-37	24-31		7.4-8.4	1
	37-60	24-31		7.4-8.4	5-30
512B:			 	 	
Danabrook	0-13	19-26	 	5.6-7.3	0
İ	13-33	15-25		5.1-7.3	
	33-50	12-21		5.6-7.8	1
	50-60	9.0-13		7.4-8.4	15-40

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	1	Effective cation-		Calcium
		capacity	exchange capacity	 	ate
	In	·	meq/100 g	pH	Pct
					İ
512C2: Danabrook	0-8	17-24	 	 5.6-7.3	0
Danabiook	8-27	15-25		5.1-7.3	0
İ	27-40	12-21	i	5.6-7.8	0-20
	40-65	9.0-13		7.4-8.4	15-40
516A:			 	 	
Faxon	0-12	18-23	 	5.1-7.3	0
	12-36	j	11-18	4.5-7.3	0
	36-60				
527C2:			 	 	
Kidami	0-9	7.0-16	 	 5.1-7.3	0
İ	9-30	10-19	i	5.1-7.3	0
	30-40	8.0-15		6.1-8.4	0-30
	40-60	7.0-11		7.4-8.4	25-40
527D2:			 	 	
Kidami	0-10	7.0-16		5.1-7.3	0
İ	10-27	10-19		5.1-7.3	0
	27-35	8.0-15		6.1-8.4	0-30
	35-60	7.0-11		7.4-8.4	25-40
530B:			 	 	
Ozaukee	0-4	9.0-20	i	6.1-7.3	0
	4-10	7.0-16		6.1-7.3	0
	10-21 21-39	20-26 15-22		6.1-7.3 7.4-8.4	0
	39-60	13-22	 	7.4-8.4	0-20
					İ
530C2: Ozaukee	0-6	9.0-18	 	 6.1-7.3	0
Ozaakee	6-21	20-26	l	6.1-7.3	0
i	21-28	15-22	i	7.4-8.4	0-20
	28-60	13-19		7.9-8.4	10-40
530C3:			 	 	
Ozaukee	0-9	14-22	 	6.1-7.3	0
İ	9-21	20-26	i	6.1-7.3	0
	21-27	15-22		7.4-8.4	0-20
	27-60	13-19		7.9-8.4	10-40
530D2:			! 	 	
Ozaukee	0-6	9.0-18	i	6.1-7.3	0
	6-20	20-26		6.1-7.3	1
	20-28	15-22		7.4-8.4	
	28-60	13-19	 	7.9-8.4	10-40
530D3:				! 	
Ozaukee	0 - 9	14-22		6.1-7.3	0
	9-21	20-26		6.1-7.3	
	21-25	15-22	 	7.4-8.4	
	25-60	13-19	 	/.J-8.4 	10-40
530E2:		İ	İ	İ	İ
Ozaukee	0-6	9.0-18		6.1-7.3	
	6-27	20-26		6.1-7.3	
	27-31 31-60	15-22 13-19	 	7.4-8.4	
	00		I I	, O.1	10

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	exchange	Effective cation- exchange capacity	reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pН	Pct
F207					
530F: Ozaukee	0-5	9.0-20	 	 6.1-7.3	0
	5-29	20-26		6.1-7.3	0
İ	29-36	15-22	i	7.4-8.4	0-20
	36-60	13-19		7.9-8.4	10-40
541B:			 	 	
Graymont	0-12	19-26		6.1-7.3	0
Ī	12-33	15-25	i	5.6-7.3	0
	33-38	12-23		6.6-7.8	0-10
	38-60	13-20		7.4-8.4	5-30
541B2:			 	 	
Graymont	0-8	19-24		6.1-7.3	0
Ī	8-24	15-25	i	5.6-7.3	0
	24-35	13-25		6.6-7.8	0-10
	35-60	14-22		7.4-8.4	5-30
541C2:			 	 	
Graymont	0 - 9	19-24	i	6.1-7.3	0
Ī	9-30	15-25	i	5.6-7.3	0
	30-38	12-23		6.6-7.8	0-10
	38-60	13-20		7.4-8.4	5-30
542A:			 	 	
Rooks	0-15	23-29		6.1-7.3	0
	15-30	21-35		5.6-7.3	0
	30-45 45-60	7.6-23	 	7.4-8.4	15-40
	45-60	19-34	 	/.4-8.4 	5-30
542B:					İ
Rooks	0-10	23-29		6.1-7.3	0
	10-28	21-35		5.6-7.3	0
	28-49 49-60	7.6-23 19-34	 	7.4-8.4	15-40
	45-00	15-54		7.4-0.4	3-30
549B:		İ	İ		İ
Marseilles	0 - 5	11-15		5.1-7.3	0
	5-9 9-28	13-19	4.3-9.1	4.5-6.5	0
	28-40	13-19	9.1-22	4.5-6.5	0
	40-60				
		[
549C2:	0.5	14-22	 	 5.1-6.5	
Marseilles	0-5 5-16	15-23	 	4.5-6.5	0
	16-26	16-27		4.5-6.5	1
j	26-60	i	i		j
54050					
549D2: Marseilles	0-5	14-22	 	 5.1-6.5	 0
Marberreb	5-27	16-27	16-27	4.5-6.5	1
	27-60				
549F: Marseilles	0-10	14-22	 	 5.1-6.5	 0
	10-35	14-23	14-23	4.5-6.5	0

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	exchange capacity		Soil reaction 	Calcium carbon- ate
	In		meq/100 g	pH	Pct
					[
549G:	0 10	14.22	 		
Marseilles	0-10 10-35	14-22	 14-23	5.1-6.5	0
	35-60				
		į	İ	İ	i
554B:		Į.			
Kernan	0-5	17-23		5.1-7.3	0
	5-12 12-36	12-22	 17-23	5.1-7.3	0
	36-43	25-43	17-23	6.1-7.8	0-15
	43-60	26-47		7.4-8.4	5-30
j		İ	İ	İ	İ
560D2:		ļ			!
St. Clair	0-5	15-24		5.1-7.3	0
	5-8 8-22	13-20	 	5.1-7.3	0
	22-37	23-32	 	7.4-8.4	0-20
	37-65	17-29	 	7.9-8.4	15-35
		į	İ	İ	i
560E:					
St. Clair	0-5	15-25		5.1-7.3	0
	5-12	23-32		5.6-7.8	0
	12-26 26-60	20-29 17-29	 	7.4-8.4	0-20
	20-00	17-23	 	7.9-0.4	13-33
567B:		İ			İ
Elkhart	0-13	14-30		5.6-7.3	0
	13-37	17-31		5.6-7.8	0-5
	37-52	10-25		7.4-8.4	0-25
	52-60	9.0-23	 	7.9-8.4	15-40
572A:			 	 	
Loran	0-14	20-36		6.1-7.3	0
İ	14-39	14-25		6.1-7.8	0-5
I	39-53	18-27		6.6-8.4	0-15
	53-60				
572B:		I	 	 	
Loran	0-12	20-36	 	6.1-7.3	0
	12-43	14-25		6.1-7.8	0-5
İ	43-51	18-27		6.6-8.4	0-15
	51-60	ļ			
572C2:			 	 -	
Loran	0-9	20-36	l I	6.1-7.3	0
	9-41	14-25		6.1-7.8	
i	41-60	18-27		6.6-8.4	0-15
I	60-70				
C143 -					
614A: Chenoa	0-12	27-40	 	 6.1-7.3	0
Circlioa	12-32	27-40	 	5.6-7.3	0
	32-36	13-24		6.6-8.4	1
j	36-60	11-22	i	7.4-8.4	15-30
					[
614B:	0.15	27 42			
Chenoa	0-15 15-28	27-40	 	6.1-7.3 5.6-7.3	1
	28-47	13-24	 	6.6-8.4	1
	47-60	11-22		7.4-8.4	1
		i	i I	i I	i

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	exchange	Soil reaction 	Calcium carbon- ate
	In	 mag/100 g	meq/100 g		 Pct
	111	meq/100 g	med/100 g	pH 	PCC
662B:		j	İ	İ	į
Barony	0 - 8	13-24		5.1-7.8	0
	8-34 34-54	16-23	 	5.1-7.3	0 0 - 5
	54-85	3.0-22		5.6-8.4	0-3
j		j	İ	İ	i
663B:					
Clare	0-14 14-36	17-26 16-25		5.6-7.8	0
	36-44	11-21		5.6-7.8	0-5
	44-60	6.0-16	i	6.1-8.4	0-20
667B: Kaneville	0-9	13-24	 	5.6-7.3	0
Raneville	9-44	17-22		5.6-7.8	0
	44-52	9.0-20		6.1-8.4	0-10
	52-80	6.0-18		6.1-8.4	0-20
668B:			 	 	
Somonauk	0-9	10-22		5.1-7.3	0
	9-26	13-23		5.1-7.3	0
İ	26-55	9.0-20		5.1-7.8	0-5
	55-60	3.0-13		6.1-8.4	0-20
675B:			 	 	
Greenbush	0-14	20-25		5.1-7.3	0
İ	14-60	25-30	i	4.5-7.3	0
	60-80	20-25		5.6-7.3	0
675C2:			 	 	
Greenbush	0 - 6	20-25		5.1-7.3	0
İ	6-46	25-30		4.5-7.3	0
	46-60	20-25		5.6-7.3	0
679B:			 	 	
Blackberry	0-16	17-26		6.1-7.3	0
İ	16-47	15-23		5.1-7.3	0
	47-62	9.0-22		5.6-8.4	0-10
	62-70	3.0-19		5.6-8.4	0-20
680B:					
Campton	0 - 8	14-22		5.1-7.8	0
	8-45	15-23		4.5-7.3	
	45-51 51-80	9.0-19 3.0-16		5.1-7.8	0-5
	31-00	3.0-10		3.1-7.0	0-20
712A:		j	İ	İ	İ
Spaulding	0-22	24-33		7.4-8.4	
	22-38	17-25	 	7.4-8.4	5-40
	38-44 44-80	14-23 12-17		7.4-8.4	5-40
			<u> </u>		
715A:					
Arrowsmith	0-12	16-32		6.1-7.3	0
	12-30 30-39	17-31 9.0-22	 	6.1-7.8 7.4-8.4	0-10
	39-60	5.0-20		7.9-8.4	15-35
	22 00				23 33
	33-60	5.0-20	 	7.3-8.4	15-3

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Soil reaction	Calcium carbon- ate
			capacity		
	In	meq/100 g	meq/100 g	pН	Pct
732A:			 	l I	
Appleriver	0-8	17-23	 	5.1-6.5	0
	8-35	16-27		5.6-6.5	0
İ	35-45	19-37	i	5.1-7.8	0-20
I	45-60				
732B: Appleriver	0-14	15-22	 	 5.6-7.3	0
Appielivel	14-34	14-23	 	5.1-6.0	0
	34-58	14-21		5.1-7.8	0-20
i	58-60	j	i	· 	j
I					
791A:		Ţ	!		!
Rush	0-4	9.0-22		5.1-7.3	0
	4-11 11-38	8.0-18 15-23	 	5.1-7.3	0
	38-45	9.0-20	 	4.5-6.5	0
	45-60	1.0-5.0		7.4-8.4	10-35
i			İ	İ	
791B:		İ	j	j	į
Rush	0 - 7	9.0-22		5.1-7.3	0
	7-11	8.0-18		5.1-7.3	0
	11-35	15-23		4.5-6.5	0
	35-46 46-60	9.0-20		4.5-7.3 7.4-8.4	0 10-35
	40-00	1.0-5.0	 	/.4-0.4	10-35
792A:		i	İ		i
Bowes	0 - 9	16-24	i	5.1-7.3	0
I	9-13	9.0-20		5.1-7.3	0
	13-43	16-23		5.1-6.5	0
	43-51	6.0-18		5.6-7.8	0-10
	51-61	2.0-7.0		7.4-8.4	10-40
792B:			l I	 	
Bowes	0-7	16-24		5.1-7.3	0
i	7-37	16-23	i	5.1-6.5	0
İ	37-43	6.0-18	i	5.6-7.8	0-10
	43-60	2.0-7.0		7.4-8.4	10-40
794G: Marseilles	0-10	14-22	 	 5.1-6.5	0
marserres	10-35	16-27		4.5-6.5	0
	35-60				
i		i	İ	İ	i
Northfield	0-3	5.4-11		5.6-7.3	0
I	3-16	7.9-15		4.5-6.5	0
	16-60				
Ditabas	0-4	10.00		 5.6-7.8	
Ritchey	4-18	12-22	 	5.6-7.8	1
	18-60	10-10	 		0-20
	• • •	İ			İ
802B:		İ			İ
Orthents, loamy		10-25		5.6-7.8	
	6-60	10-20		5.6-8.4	0-20
		ļ			
802D:	0 5				
Orthents, loamy	0-6 6-60	10-25	 	5.6-7.8	
	0-00	10-20	!	3.0-8.4	0-20

Table 23.--Chemical Properties of the Soils--Continued

	:	exchange capacity	 	carbon-
In		meq/100 g		Pct
 0-3	12-20	 	 5.6-7.8	0-10
3-60		6.9-14	2.5-4.5	0
 0-3	12-20	 	 5 6-7 8	0-10
3-60		6.9-14	2.5-4.5	0
 0-6	22-38	 	 5 6-7 8	0-10
6-60	15-35		6.1-8.4	0-25
İ	İ	İ	İ	į
	16.20			
	1	!		0
22-46	17-31		5.6-7.3	0
46-60	9.0-22	i	6.6-7.8	0-15
	10.05			
	1	!		0
67-80	12-18		6.6-7.8	0-15
				į
0.11	7 0 17	l I		
	1	 		0
16-19	1.0-6.0		6.1-7.3	0
19-60		i	i	j
	1	!		0
27-32	1.0-6.0		5.1-7.3	0
32-60				i
İ		l I	l I	
 0-7	7.0-17	 	 6.1-7.3	0
7-15	6.0-13		6.1-7.3	0
15-60				
	1	 		0
23-60				
				į
0.10	16.22	l I		
'	'	 		0
38-45	16-27		5.6-7.3	0
45-49	6.0-18			0-10
49-60	4.0-16		7.4-8.4	15-40
 0-11	17-24	 	 5.1-7.3	0
11-44	14-23		5.1-7.3	0
44-49	12-22		6.1-7.8	0-5
49-60	4.0-16		7.4-8.4	5-25
0-5	14-22		6.1-7.8	0-20
5-18	11-19	i	6.1-8.4	0-40
18-60	11-18		7.4-8.4	10-45
 0-6	4.0-20	 	 5.6-7.3	0
6-22	4.0-20	 	5.6-7.8	0-3
22-60	0.0-3.0		7.4-8.4	1-25
	3-60 0-3 3-60 0-6 6-60 16-22 22-46 46-60 0-15 15-67 67-80 11-16 16-19 19-60 0-12 12-27 27-32 32-60 0-7 7-15 15-60 0-11 11-23 23-60 0-18 18-38 38-45 45-49 49-60 0-11 44-49 49-60 0-5 5-18 18-60 0-6 6-22 0-6 6-22	0-3	0-3	3-60 6.9-14 2.5-4.5 0-3 12-20 5.6-7.8 3-60 6.9-14 2.5-4.5 0-6 22-38 5.6-7.8 6-60 15-35 6.1-8.4 0-16 16-32 6.1-7.3 16-22 16-27 5.6-7.3 16-22 16-27 5.6-7.3 46-60 9.0-22 6.6-7.8 0-15 18-25 5.6-7.3 15-67 15-23 5.6-7.8 67-80 12-18 6.1-7.3 16-19 1.0-6.0 6.1-7.3 19-60 5.1-7.3 12-27 6.0-13 5.1-7.3 12-27 6.0-13 5.1-7.3 12-27 6.0-13 5.1-7.3 12-27 6.0-13 5.1-7.3 12-20 1.0-6.0 5.1-7.3 12-30 5.1-7.3 <

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	!		Calcium carbon- ate
		·	capacity		
	In	meq/100 g	meq/100 g	pH	Pct
820G:			 	 	1
Hennepin	0-5	14-22	 	6.1-7.8	0-20
	5-16	11-19	i	6.1-8.4	0-40
İ	16-60	11-18	i	7.4-8.4	10-45
		1	!		!
Casco	0-7	4.0-20		5.6-7.3	0
	7-15 15-60	4.0-30	 	5.6-7.8	0-3
	13-00	0.0-3.0	 	/.1-0.1	1-23
830. Landfills			 	 	
864. Pits, quarry			 	 	
865. Pits, gravel			 	 	
969E2:			 	 	
Casco	0-5	8.0-19		5.6-7.3	0
İ	5-19	11-23	i	5.6-7.8	0-5
	19-60	0.0-4.0		7.4-8.4	1-25
Do donos	0.6				0.15
Rodman	0-6 6-10	8.0-19 2.0-17	 	6.6-7.8	0-15
	10-60	0.0-7.0		7.4-8.4	10-45
İ		j	j	j	İ
969F:		1	!		!
Casco	0-4	8.0-21		5.6-7.3	0
	4-15 15-60	11-23	 	5.6-7.8	0-5
j	13 00	0.0 1.0	i I		123
Rodman	0-11	8.0-21		6.6-7.8	0-15
	11-14	2.0-17		6.6-7.8	0-25
	14-60	0.0-7.0		7.4-8.4	10-45
1103A:			 	 	
Houghton	0-12	140-200	 	4.5-7.8	0
	12-60	100-200		4.5-7.8	0
		İ			İ
1480A:					
Moundprairie	0-9 9-37	23-29	 	7.4-7.8	1-10
	37-60	15-28 13-29	 	6.6-7.8	
		23 25			0 20
3073A:		j	j	j	İ
Ross	0-23	14-26		6.1-7.8	
	23-54	12-24		6.1-7.8	
	54-60	5.0-15	 	6.1-8.4	0-20
3076A:					İ
Otter	0-27	16-30		6.1-7.8	0
	27-41	12-23		6.1-7.8	,
	41-65	10-21		6.1-8.4	0-10
3082A:			 	 	1
Millington	0-26	20-28	 	7.4-8.4	5-20
J	26-53	14-27		7.4-8.4	5-30
	53-60	11-25		7.4-8.4	10-30

Table 23.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange	Effective cation-	1	Calcium
		capacity	exchange capacity	 	ate
	In	meq/100 g	meq/100 g	pH	Pct
3107A:				 	
Sawmill	0-29	23-35	 	6.1-7.3	0
İ	29-48	18-30		6.6-7.8	0-5
	48-60	15-27		6.6-8.4	0-20
3321A:				 	
Du Page	0-17	17-26		6.6-8.4	0-15
	17-34 34-60	11-18		7.4-8.4	5-40
	34-60	4.0-15		7.9-8.4 	5-40
3451A:	0 14	15.00	 		
Lawson	0-14 14-33	15-28 13-29	 	6.1-7.8 6.1-7.8	0
İ	33-80	11-23		6.1-7.8	0
3480A:				 	
Moundprairie	0-9	23-29	 	 7.4-7.8	1-10
i	9-43	15-28	i	7.4-7.8	1-10
	43-60	13-29		6.6-7.8	0-10
3800A:				 	
Psamments	0-60	0.1-9.0		4.5-7.3	0
	60-80	0.1-6.0		4.5-7.3	0
7073A:			į		į
Ross	0-20 20-36	12-26		6.1-7.8	0 0 - 20
	36-60	2.0-15		6.1-8.4	0-20
8073A:				 	
Ross	0-32	14-26	 	6.1-7.8	0
	32-50	12-24		6.1-7.8	0-10
	50-60	5.0-15		6.1-8.4	0-20
8107A:				 	
Sawmill	0-26	23-36		6.1-7.8	0
	26-53 53-60	18-34	 	6.1-7.8	0-5
	53-60	10-34		6.1-6.4	0-30
8151A: Ridgeville	0-16	10-17		 5.6-7.3	0
kiugeviiie	16-40	7.0-13		5.6-6.5	0
į	40-60	2.0-7.0	ļ	6.1-7.3	0
8404A:			 	 	
Titus	0-13	25-32		6.1-7.3	0
	13-68	21-29		6.1-7.8	'
	68-80	12-19		6.1-7.8 	0-5
8451A:					
Lawson	0-13	13-28	 	6.1-7.8 6.1-7.8	0
	13-53 53-80	13-29 11-23		6.1-7.8	0 0
05163.				 	
8516A: Faxon	0-12	18-28		 5.1-7.3	0
j	12-36	14-24		4.5-7.3	0
	36-60				

Table 24.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

			Ponding		Flood			Water table		
Map symbol and soil name	Hydro- logic group	Surface water depth	Duration	Frequency 	Duration 	Frequency 	Months 	Upper limit	Lower limit	Kind of water table
		Ft					ĺ	Ft	Ft	Ī
				[[
3B:										
Blount	C			None		None		0.5-2.0		
	 			None	 	None	Jun-Dec	>6.0 	>6.0	
1A:					! 	 	 			
Muscatune	В	i i		None	i	None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	
0C2: La Rose	 в			None	 	 None	 Jan-Dec		 >6.0	
La ROSE	-			None	 	None	Jan-Dec	>0.0	>0.0	
0D2:	İ	i i		İ			İ			i
La Rose	В	i i		None	i	None	Jan-Dec	>6.0	>6.0	
1A:	_									
Atterberry	В			None		None	: -	0.5-2.0		Apparent
	 				 	 	Jun-Dec	>6.0 	>6.0	
1B:	 				! [
Atterberry	В			None		None	Jan-May	0.5-2.0	>6.0	Apparent
	İ	i i			i		Jun-Dec	>6.0	>6.0	
				[[[
7A:										
Harpster	B/D	0.0-0.5	Brief	Frequent		None	: -	0.0-1.0		Apparent
	 				 	 	Jun-Dec	>6.0 	>6.0	
8A:	 				! [
Sable	B/D	0.0-0.5	Brief	Frequent		None	Jan-May	0.0-1.0	>6.0	Apparent
	İ	i i			i		Jun-Dec	>6.0	>6.0	
6B:	_						_			
Osco	B	 		None	 	None	Jan	>6.0 4.0-6.0	>6.0 >6.0	
					 	!	May-Dec		>6.0 >6.0	Apparent
		i i								
5C2:	İ	į į		į	İ	j	į		İ	į
Osco	В			None		None	Jan	>6.0	>6.0	
								4.0-6.0		Apparent
				None		None	May-Dec	>6.0	>6.0	
7A:	 	 			 	l I	l I	 	 	
Dickinson	l B			None	 	None	Jan-Dec	>6.0	>6.0	
		i i		İ	İ	ĺ	İ			į
7B:		į į		İ	ĺ	ĺ	ĺ			ĺ
Dickinson	В			None		None	Jan-Dec	>6.0	>6.0	
7.00 -								l I	 	
7C2: Dickinson	 B			None	 	 None	 Jan-Dec	 >6 0	 >6.0	
						1 110116				
BB:	İ	į į		İ	į	į	İ	İ	İ	į
Sparta	A	i i		None	i	None	Jan-Dec	>6.0	>6.0	
8D:										
Sparta	A			None		None	Jan-Dec		>6.0	

Table 24.--Water Features--Continued

			Ponding		Floo	ding		7	Water tal	ble
Map symbol and soil name	Hydro- logic group	Surface water depth	Duration	Frequency	Duration	Frequency	Months 	Upper limit	Lower limit	Kind of water table
		Ft		İ	İ	İ	İ	Ft	Ft	
		ļ		ļ			ļ			ļ
91A:				Name .		Name -	 Tam Wass			Damahad
Swygert	C			None	 	None	Jun-Dec	1.0-2.0	2.9-5.1 >6.0	
				i	! 					
1B:	İ	į į		İ	İ	İ	j	İ	İ	j
Swygert	C			None		None	-	1.0-2.0		
							Jun-Dec	>6.0	>6.0	
1B2:	l I				 	 	 	 	 	
Swygert	С	i i		None		None	Jan-May	1.0-2.0	2.9-5.1	Perched
	İ	j j				i	Jun-Dec	>6.0	>6.0	
				!						
1C2: Swygert	l C			None	 	None	Ton More	 1.0-2.0		Domahad
bwyger c	[None	 	None	Jun-Dec		2.9-3.1 >6.0	
	i	i i		i						
1C3:		l i								
Swygert	C			None		None	_	1.0-2.0		!
							Jun-Dec	>6.0	>6.0	
.03A:	 				 	 	 		 	
Houghton	A/D	0.0-1.0	Brief	Frequent		None	Jan-Jun	0.0-1.0	>6.0	Apparent
							Jul-Oct	>6.0	>6.0	
		0.0-1.0	Brief	Frequent			Nov-Dec	0.0-1.0	>6.0	Apparent
04A:					 	l I				
Virgil	l B			None	 	None	 Jan-Mav	0.5-2.0	 >6.0	Apparent
3		i i					Jun-Dec		>6.0	
	İ	i i		İ	İ	İ	į	İ	İ	j
05A:				!		!				
Batavia	B			None		None	Jan-Dec	>6.0	>6.0	
.05B:					 	 	 	 	 	
Batavia	В	i i		None	i	None	Jan-Dec	>6.0	>6.0	
				1		[
L05C2:	_									
Batavia	B			None		None	Jan-Dec	>6.0 	>6.0	
25A:					 			 	 	
Selma	B/D	0.0-0.5	Brief	Frequent		None	Jan-May	0.0-1.0	>6.0	Apparent
						ļ	Jun-Dec	>6.0	>6.0	
31D.										
.31B: Alvin	 B			None	 	 None	 Jan-Dec	 >6 0	 >6 0	
111 V 111	-				! 					
31C2:	İ	į į		İ	j	İ	į	İ	İ	į
Alvin	В			None		None	Jan-Dec	>6.0	>6.0	
223.										
32A: Starks	l I B			None	 	None	 .Tan-Mav	 0.5-2.0	 >6 0	 Apparent
DOGERD	-						Jun-Dec		>6.0	
	İ	į į		İ	j	İ	į	İ	İ	į
34A:				ļ	!	ļ.	[
Camden	B			None		None	Jan-Dec	>6.0	>6.0	
34B:	l I			 	 	 	 	 	 	
Camden	 B			None		None	 Jan-Dec	>6.0	>6.0	
	İ	i i		İ			į			į
.34C2:		l i					I			
Camden	В	i i		None	i	None	Jan-Dec		>6.0	

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water ta	ble
Map symbol		:	Duration	Frequency	Duration	Frequency	Months		Lower	Kind of
and soil name	logic	water						limit	limit	water
	group	depth		1	1	<u> </u>	<u> </u>	 Ft	 Ft	table
	l I	FC				 	 	FC	FC	
134D2:	į	j i		İ	İ	İ	j	į	į	į
Camden	В			None		None	Jan-Dec	>6.0	>6.0	
134D3:	 				 	 	 	 	 	
Camden	В			None		None	Jan-Dec	>6.0	>6.0	
	ļ			!			ļ		ļ	
134F: Camden	 B			None	 	 None	 Jan-Dec	>6 0	 >6.0	
Cumacii	-									
146A:	į	į į		İ				ĺ	ĺ	ĺ
Elliott	C			None		None	: -	1.0-2.0		
	l I					 	Jun-Dec	>6.0 	>6.0 	
146B:	İ						İ		İ	
Elliott	C			None		None	Jan-May	1.0-2.0	1.7-4.3	Perched
							Jun-Dec	>6.0	>6.0	
146B2:	 				 	 	 	 	 	
Elliott	C			None		None	Jan-May	1.0-2.0	1.7-4.3	Perched
	ĺ						Jun-Dec	>6.0	>6.0	
1.4500										
147B2: Clarence	 D			None	 	 None	 Jan-Mav	1.0-2.0	 2.0-4.0	 Perched
014101100	i -						Jun-Dec		>6.0	
	İ	į į		İ	İ	İ	İ	İ	İ	İ
148A:							 			
Proctor	B 			None		None	Jan-Dec	>6.0 	>6.0 	
148B:	İ	i i		İ			İ		İ	
Proctor	В			None	ļ	None	Jan-Dec	>6.0	>6.0	
148C2:	 					 	 	 	 	
Proctor	 B			None		None	Jan-Dec	>6.0	 >6.0	
	İ	į i		İ	İ	j	į	į	į	į
149A:										
Brenton	B			None	 	None	Jan-May Jun-Dec	1.0-2.0	>6.0 >6.0	Apparent
								20.0	20.0	
151A:	İ	į į		İ	İ	İ	İ	j	İ	İ
Ridgeville	В			None		None	Jan-May Jun-Dec	1.0-2.0		Apparent
	 					 	Jun-Dec	>6.0 	>6.0 	
151B:	İ	i i		İ		İ	İ	<u> </u>	İ	İ
Ridgeville	В			None		None		1.0-2.0		Apparent
	 					 	Jun-Dec	>6.0	>6.0	
152A:						! 	 			
Drummer	B/D	0.0-0.5	Brief	Frequent	i	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	
154A:	I I			1	 	 	l I	 	l I	
Flanagan	 B			None		None	Jan-May	1.0-2.0	>6.0	 Apparent
	ļ						Jun-Dec	•	>6.0	
1813										
171A: Catlin	 B			None	 	None	 Jan	 >6.0	 >6.0	
	į -							2.0-3.5		Apparent
		i i			i	i	May-Dec		>6.0	
								1	I	1

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water tal	ble
Map symbol and soil name	Hydro- logic group	Surface water depth	Duration	Frequency 	Duration 	Frequency 	Months	Upper limit	Lower limit	Kind of water table
		Ft		1	İ	İ		Ft	Ft	
	i	i i		İ	İ	İ	İ			
171B:	ĺ	į į		Ì	ĺ	İ	İ	ĺ	ĺ	ĺ
Catlin	В			None		None	Jan	>6.0	>6.0	
								2.0-3.5		Apparent
							May-Dec	>6.0	>6.0	
17100										
171B2: Catlin	 B			None	l I	None	 Jan	 >6.0	 >6.0	
Catilii	P			None		None	1	2.0-3.5		Apparent
	i	i i					May-Dec	1	>6.0	
	i	i i			i	i				
171C2:	i	i i		İ	İ	i		i	i	
Catlin	В	i i		None	i	None	Jan	>6.0	>6.0	
	İ	i i					Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	
171C3:				!	ļ	İ				
Catlin	В			None		None		>6.0	>6.0	
	!						: -	2.0-3.5		Apparent
							May-Dec	>6.0	>6.0	
193C2:				 	l I	1				
Mayville	 B			None	 	None	 Jan	>6.0	 >6.0	
May VIIIe	5			None		None	1	2.0-3.5		1
	i				l		May-Dec		>6.0	
	i	i i		i i	l I		Dec	20.0	20.0	
198A:	i	i i			İ	i		i	i	
Elburn	В	i i		None	i	None	Jan-May	1.0-2.0	>6.0	Apparent
	İ						Jun-Dec	>6.0	>6.0	
199A:										
Plano	В			None		None	Jan-Dec	>6.0	>6.0	
	!								!	
199B:	_						_			
Plano	B			None		None	Jan-Dec	>6.0	>6.0	
199C2:				 	l I	1				
Plano	 B			None	 	None	 Jan-Dec		 >6.0	
FIANO	5			None	 	None	Uan-Dec	>0.0	20.0	
206A:	i	i i		i i	l I			 		
Thorp	C/D	0.0-0.5	Brief	Frequent	i	None	Jan-Mav	0.0-1.0	>6.0	Apparent
-	i .	i i			i		Jun-Dec	1	>6.0	
	į	į į		İ	j	İ	į	į	į	j
210A:										
Lena	A/D	0.0-1.0	Brief	Frequent		None	Jan-Jun	0.0-1.0	>6.0	Apparent
							Jul-Oct		>6.0	
	!						Nov-Dec	0.0-1.0	>6.0	Apparent
	!					!			!	!
219A:	_									
Millbrook	B			None		None		0.5-2.0		Apparent
							Jun-Dec	>6.0	>6.0	
223B:	 			1	I.	1	1	I I	 	
Varna	l l c			None	 	None	 Jan	>6.0	 >6.0	
				None		None		2.0-3.5		1
	i				İ		May-Dec		>6.0	
	i			İ	İ	i				
223B2:	i	į i		İ	İ	i	i	i	i	İ
Varna	C	i i		None	i	None	Jan	>6.0	>6.0	i
		i i		j	j	j	Feb-Apr	2.0-3.5	2.2-5.5	Perched
		i i		i	i	j	May-Dec	>6.0	>6.0	i
	1	ı i		I	I	İ	I	I	I	I

Table 24.--Water Features--Continued

	I		Ponding		Floo	ding	Ī		Water ta	ble
Map symbol and soil name	Hydro- logic group	Surface water depth	Duration	Frequency	Duration 	Frequency	Months	Upper limit	Lower limit	Kind of water table
	group	Gepth			l	I	l l	 Ft	 Ft	Labie
	İ			İ		İ	İ			
223C2:										
Varna	C			None		None	Jan	>6.0	>6.0	
								2.0-3.5		
							May-Dec	>6.0	>6.0	
223C3:					 	İ	 	 	 	
Varna	C			None		None	Jan	>6.0	>6.0	
	į			i	i	j	Feb-Apr	2.0-3.5	2.2-5.5	Perched
							May-Dec	>6.0	>6.0	
00270										
223D2: Varna	 C			None	 	None	 Jan	 >6.0	 >6.0	
varna	-			None		None		2.0-3.5		1
	i						May-Dec		>6.0	
	į	j i		İ	İ	į	į	j	į	į
223D3:		ļ i				ļ	!	ļ	ļ	ļ
Varna	C			None		None	Jan	>6.0	>6.0	
								2.0-3.5		
	 						May-Dec	>6.0 	>6.0	
228B:						i I	 	 	 	
Nappanee	D			None	i	None	Jan-May	0.5-2.0	2.0-5.5	Perched
	ĺ						Jun-Dec	>6.0	>6.0	
228C2: Nappanee	 D			None	 	None	Ton More	 0.5-2.0		Domahad
маррапее	ן ט			None		None	Jun-Dec		2.0-3.5 >6.0	
						i				
228C3:	i	į į		İ	İ	İ	į	j	İ	j
Nappanee	D			None		None	Jan-May	0.5-2.0	2.0-5.5	Perched
							Jun-Dec	>6.0	>6.0	
232A:								 		
Ashkum	 C/D	0.0-0.5	Brief	Frequent	 	None	 .Tan-Mav	0.0-1.0	 >6.0	 Apparent
	-/-						Jun-Dec		>6.0	
	į	j i		İ	İ	į	į	j	į	į
233A:				[I	[
Birkbeck	В			None		None	Jan	>6.0	>6.0	
								2.0-3.5	!	
	 						May-Dec	>6.0 	>6.0 	
233B:						i				
Birkbeck	В	i i		None	j	None	Jan	>6.0	>6.0	i
							Feb-Apr	2.0-3.5	3.3-5.8	Perched
							May-Dec	>6.0	>6.0	
233C2:				1	l I	l I	 	 		
Birkbeck	 B			None	 	 None	 Jan	 >6.0	 >6.0	
	i -						1	2.0-3.5		
	į	j j			i	i	May-Dec	>6.0	>6.0	
				!	ļ.	ļ.	!		ļ	[
234A:				None		None	Ton Week	11 0 2 2		
Sunbury	B			None		None		1.0-2.0 >6.0		Apparent
			_ 					-0.0	/0.0	-
235A:	i	i		İ	İ	į	i	į	į	į
Bryce	D	0.0-0.5		Frequent		None		0.0-1.0		Apparent
							Jun-Dec	>6.0	>6.0	
2263.				1	 			 		
236A: Sabina	 C			None	 	None	 Jan - May	 0.5-2 0	 3.7-6 0	 Perched
				None		None		>6.0		
	i	i		i	i	i	i	i	i	i

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water ta	ble
Map symbol and soil name	Hydro- logic group	Surface water depth	Duration	Frequency 	Duration	Frequency	Months	Upper limit	Lower limit	Kind of water table
		Ft		İ	İ	İ	İ	Ft	Ft	
		į į		İ	ĺ	ĺ	ĺ		ĺ	
238A:				!	!	!				
Rantoul	D	0.0-0.5	Long	Frequent		None		0.0-1.0		Apparent
							Jul-Dec	>6.0	>6.0	
0.41.02										
241C3: Chatsworth	l D			None	 	 None	 Jan	 >6.0	 >6.0	
Chatsworth	ן ט			None	 	None		2.0-3.5		1
	 				 	 	May-Dec	!	2.2-4.0 >6.0	
	! 	i i		i	İ	! 				İ
241D3:	İ	i i		i	İ	İ	<u> </u>	İ	İ	
Chatsworth	D	i i		None	i	None	Jan	>6.0	>6.0	j
	ĺ						Feb-Apr	2.0-3.5	2.2-4.0	Perched
							May-Dec	>6.0	>6.0	
241E3:										
Chatsworth	D			None		None	Jan	>6.0	>6.0	
								2.0-3.5		
							May-Dec	>6.0	>6.0	
0.41.77										
241F: Chatsworth	l D	 		None	l I	 None	 Jan	 >6.0	 >6.0	
Chatsworth	ן ע			None	 	None		2.0-3.5		1
	l I				l		May-Dec	:	>6.0	
	! 	i i			I I	! [20.0	20.0	
241G:	i I	i i		i	İ	İ	<u> </u>	! 	İ	İ
Chatsworth	D	i i		None	i	None	Jan	>6.0	>6.0	
	į	i i			i	i	Feb-Apr	2.0-3.5	2.2-4.0	Perched
	ĺ						May-Dec	>6.0	>6.0	
242A:										
Kendall	В			None		None		0.5-2.0		Apparent
							Jun-Dec	>6.0	>6.0	
0.403										
243A: St. Charles	 в			None	l I	 None	 Jan-Dec		 >6.0	
St. Charles	B			None		None	Jan-Dec	>0.0	>0.0	
243B:	l I				 	 	 	 	 	
St. Charles	l B	 		None		None	Jan-Dec	>6.0	>6.0	
	i –	i i			İ					İ
243C2:	İ	i i		į	İ	İ	İ	İ	İ	į
St. Charles	В	i i		None	i	None	Jan-Dec	>6.0	>6.0	j
	j	į į		İ	j	İ	į	j	j	İ
244A:										
Hartsburg	B/D	0.0-0.5		Frequent		None	-	0.0-1.0		Apparent
							Jun-Dec	>6.0	>6.0	
278A:	_									
Stronghurst	B	 		None	 	None	Jan-May Jun-Dec	0.5-2.0	>6.0 >6.0	Apparent
	 					 	Jun-Dec	>0. 0	>0.0	
278B:	! 				i I	! 	! 	! 	İ	!
Stronghurst	 B			None		None	Jan-Mav	0.5-2.0	>6.0	Apparent
	İ	i i					Jun-Dec		>6.0	
	İ	į i		i	İ	İ	į	İ	İ	İ
279B:		ı i		I						
Rozetta	В	i i		None	j	None	Jan	>6.0	>6.0	i
		j j			i	i	Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	
				1	Į.	[
280C2:	ļ			!	!					
Fayette	В			None		None	Jan-Dec	>6.0	>6.0	
	I	1		I	I		1	1	I	1

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1 1	Water ta	ble
Map symbol and soil name	logic	Surface		Frequency	Duration	Frequency	Months	'	Lower	Kind of water
	group	depth Ft		1	1	1	 	 Ft	 Ft	table
	1	FC			l I		 	FC	FC	
290A:	i	j i		İ	į	İ	j	į	į	į
Warsaw	В			None		None	Jan-Dec	>6.0	>6.0	
290B: Warsaw	 B			None		None	 Jan-Dec		 >6.0	
walsaw	5			None		None	Dan-Dec 	20.0	>0.0	
290C2:	ì				İ	i	İ			
Warsaw	В	j j		None	i	None	Jan-Dec	>6.0	>6.0	j
	-				ļ	ļ			!	
293A:					 	Name -	 Tan Mass			
Andres	C			None		None	Jun-Dec	1.0-2.0	>6.0	
	1			i	i	i				
293B:	i	j i		İ	į	İ	j	į	į	į
Andres	C			None		None		1.0-2.0	3.0-5.5	Perched
							Jun-Dec	>6.0	>6.0	
294B:					l I		 	 		
Symerton	c			None		None	 Jan	>6.0	>6.0	
2,		i i						2.0-3.5		Perched
	İ	j j			i		May-Dec	>6.0	>6.0	j
	!			!	ļ	ļ	ļ	[!	
294C2:		 			 	Name -	 		 >6.0	
Symerton	C			None		None	Jan Feb-Apr	>6.0 2.0-3.5		1
		 					May-Dec		>6.0	
	i	i i		İ	į	İ	į	İ	j	İ
295A:	1			[[1				
Mokena	C			None		None		1.0-2.0	1	
							Jun-Dec	>6.0	>6.0	
295B:					İ		 		 	
Mokena	C	i i		None	i	None	Jan-May	1.0-2.0	2.5-5.5	Perched
							Jun-Dec	>6.0	>6.0	
298B: Beecher	 C	 		None	 	None	 -Tan-Marr	 0.5-2.0	0_4_3	Porghod
Deecher							Jun-Dec		>6.0	
	i	j i		İ	į	İ	j	į	į	į
311B:										
Ritchey	D			None		None	Jan-Dec	>6.0	>6.0	
314A:					l I	l I	l I	 		
Joliet	 D	0.0-0.5	Brief	Frequent		None	 Jan-May	0.0-1.0	0.5-1.7	Perched
	i						Jun-Dec		>6.0	
315B:										
Channahon	D I			None		None	Jan-Dec	>6.0	>6.0	
317A:	1				 		 	 	 	
Millsdale	C	0.0-0.5	Brief	Frequent		None	Jan-Jun	0.0-1.0	2.0-3.3	Perched
	İ						Jul-Dec	>6.0	>6.0	
318B:	10			None		None	 Tan Dag			
Lorenzo	B			None		None	Jan-Dec	>0. 0	>6.0 	
318C2:	İ									
Lorenzo	В	i i		None		None	Jan-Dec	>6.0	>6.0	i
	ļ	ļ Ì		[!	ļ	ļ	!	!
320B:	-						 			
Frankfort	D I			None		None	Jan-May Jun-Dec		2.0-4.0 >6.0	Perched
	İ	 						/0.0	/0.0	- _
	1	1		1	I .	1	1	1	1	1

Table 24.--Water Features--Continued

			Ponding		Floo	ding			Water ta	ole
Map symbol and soil name	Hydro- logic	Surface water	Duration	Frequency	Duration	Frequency	Months	Upper limit	Lower limit	Kind of water
	group	depth Ft		1	1	<u> </u>	<u> </u>	 Ft	 Ft	table
	 	FC			 	 	 	FC	FC 	
320C2:	İ	i i		İ	j	İ	j	į	į	j
Frankfort	D			None		None		0.5-2.0		
	 						Jun-Dec	>6.0	>6.0	
325B:	 				 	 	 	 	 	
Dresden	В	i i		None	i	None	Jan-Dec	>6.0	>6.0	
				!	!	!				
325C2: Dresden	 B			None	 	None	 Jan-Dec	 >6 0	 >6.0	
220000	-				İ					!
327B:		į į		İ				ĺ		
Fox	В			None		None	Jan-Dec	>6.0	>6.0	
327C2:	 				 	 	 	 	 	
Fox	В			None	i	None	Jan-Dec	>6.0	>6.0	
	ļ			ļ.			<u> </u>	!	ļ	
327D2:	5			Name .		None	 Jan-Dec			
Fox	B 			None	 	None	Jan-Dec 	>6.0 	>6.0 	
330A:	İ	i i		i	İ	İ		İ	İ	
Peotone	C/D	0.0-0.5	Brief	Frequent		None		0.0-1.0		Apparent
	 						Jul-Dec	>6.0	>6.0	
344A:	 				 		 	[[
Harvard	В			None	i	None	Jan-Dec	>6.0	>6.0	
				!					ļ	
344B: Harvard	 в			None	 	None	 Jan-Dec		 >6.0	
narvaru	-			None	 	None	Jan-Dec	>0.0	>0.0	
344C2:	İ	i i		i			İ	İ	İ	
Harvard	В			None		None	Jan-Dec	>6.0	>6.0	
356A:	 				 	 	 	 	 	
Elpaso	B/D	0.0-0.5	Brief	Frequent		None	 Jan-May	0.0-1.0	>6.0	 Apparent
							Jun-Dec	>6.0	>6.0	
2753					İ	İ				l I
375A: Rutland	l C			None	 	 None	 Jan-Mav	1.0-2.0	 3.3-5.5	 Perched
	İ						Jun-Dec		>6.0	
	ļ			ļ.			<u> </u>	!	ļ	
375B: Rutland	 C			None	 	None	Ton More	 1.0-2.0		Domahad
RUCIANG	C			None		None	. –	>6.0		
	j	j i		i	į	j	j	į	į	j
375B2:										
Rutland	C			None	 	None	Jan-May Jun-Dec	1.0-2.0	3.3-5.5 >6.0	Perched
	! 			i	İ					!
388B:		į į		ĺ	ĺ	ĺ	ĺ	ĺ	ĺ	ĺ
Wenona	C			None	 	None	,		>6.0 2.3.5.5	
	 				 		May-Dec	2.0-3.5	3.3-3.5 >6.0	
	İ	i i		i	İ	İ				
388B2:		ļ į		ļ						
Wenona	C			None	 	None	1	>6.0 2.0-3.5	>6.0 3.3-5.5	Perched
	 			None		None	reb-Apr May-Dec		3.3-5.5 >6.0	Perched
		i i		į	İ			į	j	İ
388C2:							-			
Wenona	C			None	 	None		>6.0 2.0-3.5	>6.0 3 3-5 5	Perched
	! 				 		May-Dec		>6.0	
	İ	į i		i	i	İ	į	i	i	İ

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water tal	ole
Map symbol and soil name	Hydro- logic	Surface water	Duration	Frequency	Duration	Frequency	Months	Upper limit	Lower	Kind of water
	group	depth		<u> </u>		<u> </u>				table
		Ft				!		Ft	Ft	
397F:	.			77	 		 Tam Dam			 -
Boone	A			None	 	None	Jan-Dec	>6.0	>6.0	
413B:	 				 	 	 	 	 	
Gale	l B	i i		None	 	None	Jan-Dec	>6.0	>6.0	
	İ	i i				İ				İ
413C2:	İ	i i		İ		İ	i		İ	İ
Gale	В	j j		None		None	Jan-Dec	>6.0	>6.0	
435A:										
Streator	C/D	0.0-0.5	Brief	Frequent		None		0.0-1.0		Apparent
							Jun-Dec	>6.0	>6.0	
	!						!			
448B:										
Mona	C			None		None	Jan	>6.0	>6.0	
	 				 	 	: -		2.5-5.0	Perched
	l I				 		May-Dec	>0.0	>0.0	
448C2:	 				 	 	 	 	 	
Mona	C	i i		None	 	None	 Jan	>6.0	>6.0	
		i i							2.5-5.0	
	İ	i i					May-Dec		>6.0	
	İ	i i		İ		i	i	İ	İ	İ
512B:	j	į į		İ	İ	İ	į	į	Ì	İ
Danabrook	В	i i		None		None	Jan	>6.0	>6.0	
							Feb-Apr	2.0-3.5	3.0-5.0	Perched
							May-Dec	>6.0	>6.0	
512C2:						[
Danabrook	В			None		None		>6.0	>6.0	
									3.0-5.0	:
							May-Dec	>6.0	>6.0	
516A:	 			1	l I	1			[[
Faxon	 19/10	0.0-0.5	Brief	Frequent	 	None	 -Tan-Marc	 0_0_1_0	1.7-3.3	Dorahod
raxon	5/5		DITE:				Jun-Dec		>6.0	
	l I				 	 		20.0	20.0	
527C2:	! 			i	 	İ		 		!
Kidami	В	i i		None		None	Jan	>6.0	>6.0	
	į	j j				i	Feb-Apr	2.0-3.5	2.5-4.5	Perched
	j	j j				j	May-Dec	>6.0	>6.0	
527D2:				[I	[
Kidami	В			None		None		•	>6.0	•
								•	2.5-4.5	
	:						May-Dec	>6.0	>6.0	
	İ				l I		i -			
F30D.	 				 	į	į			l I
530B:		i i		 		 	 			
530B: Ozaukee	 C	 		 None	 	 None	 Jan	 >6.0 2.0-3.5	 >6.0 2.2-4.3	
	 c	 		 None 	 		Feb-Apr	2.0-3.5	2.2-4.3	Perched
	 C 	 		 None	 			2.0-3.5		
Ozaukee	 c 	 		 None 	 		Feb-Apr	2.0-3.5	2.2-4.3	Perched
	 	 		 None 	 		Feb-Apr May-Dec 	2.0-3.5	2.2-4.3	Perched
Ozaukee530C2:	 	 		 None 	 	 	Feb-Apr May-Dec Jan	2.0-3.5 >6.0 >6.0	2.2-4.3 >6.0 	Perched
Ozaukee530C2:	 	 		 None None	 	 None	Feb-Apr May-Dec Jan	2.0-3.5 >6.0 >6.0 2.0-3.5	2.2-4.3 >6.0 >6.0	Perched
Ozaukee530C2:	 	 		None None 	 	 None	Feb-Apr May-Dec Jan Feb-Apr	2.0-3.5 >6.0 >6.0 2.0-3.5	2.2-4.3 >6.0 >6.0 2.2-4.3	Perched
Ozaukee530C2:	 	 		None None 	 	 None	Feb-Apr May-Dec Jan Feb-Apr	2.0-3.5 >6.0 >6.0 2.0-3.5	2.2-4.3 >6.0 >6.0 2.2-4.3	Perched
Ozaukee530C2:	 c 	 		None None 	 	 None None	Feb-Apr May-Dec Jan Feb-Apr May-Dec Jan	2.0-3.5 >6.0 >6.0 2.0-3.5 >6.0 	2.2-4.3 >6.0 >6.0 2.2-4.3 >6.0 	Perched
Ozaukee 530C2: Ozaukee	 c 			None None 	 	 None 	Feb-Apr May-Dec Jan Feb-Apr May-Dec Jan	2.0-3.5 >6.0 >6.0 2.0-3.5 >6.0 >6.0 2.0-3.5	2.2-4.3 >6.0 >6.0 2.2-4.3 >6.0	Perched

Table 24.--Water Features--Continued

			Ponding		Floo	ding			Water ta	ble
Map symbol and soil name	logic	water	Duration	Frequency	Duration	Frequency	Months	Upper limit	Lower	Kind of water table
	group	depth	<u> </u>	I I	I I	1	1	 Ft	 Ft	table
	 	FC	l I		1	1	 	FC	FC 	
530D2:				i	i		! 	i	! 	
Ozaukee	C	i i		None	i	None	Jan	>6.0	>6.0	
	į	j j			j		Feb-Apr	2.0-3.5	2.2-4.3	Perched
							May-Dec	>6.0	>6.0	
				!	!			!		
530D3:										
Ozaukee	C		 	None	 	None	Jan	>6.0 2.0-3.5	>6.0	Domahad
	l l		 				May-Dec		2.2-4.3 >6.0	
					İ				20.0	
530E2:	İ	i i		i	i			İ	! 	İ
Ozaukee	C	j j		None	i	None	Jan	>6.0	>6.0	
							Feb-Apr	2.0-3.5	2.2-4.3	Perched
							May-Dec	>6.0	>6.0	
F208				1	Į.					
530F: Ozaukee	 C		 	 None	 	None	 Jan	 >6.0	 >6.0	
Ozaukee	0		 	None		None		2.0-3.5		1
	 		 				May-Dec		>6.0	
	İ	i		i	i					
541B:	İ	j i	İ	İ	İ	İ		İ	İ	İ
Graymont	C	i i		None		None	Jan	>6.0	>6.0	
							Feb-Apr	2.0-3.5	2.2-4.3	Perched
							May-Dec	>6.0	>6.0	
541B2: Graymont			 	None	 	None	 Jan	 >6.0	 >6.0	
Graymont	C		 	None		None		2.0-3.5		1
	l I				i		May-Dec		>6.0	
	İ	i		i	i					
541C2:	İ	j i	İ	İ	Ì	į	į	į	İ	į
Graymont	C			None		None	Jan	>6.0	>6.0	
								2.0-3.5	:	:
							May-Dec	>6.0	>6.0	
5403										
542A: Rooks	 B		 	None	l 	None	 -Tan-Marr	1.0-2.0	 2 2_5 5	Porchod
ROOKS	P		 	None		None	Jun-Dec		>6.0	
				i	i					
542B:	İ	j i	İ	İ	İ	İ		İ	İ	İ
Rooks	В			None		None	Jan-May	1.0-2.0	3.3-5.5	Perched
							Jun-Dec	>6.0	>6.0	
	ļ			!	ļ					
549B:							 			
Marseilles	B		 	None	 	None	Jan	>6.0 4.0-5.0	>6.0 E 0 E E	Domahad
	l l		 				May-Dec		>6.0	
	l I		! 		İ			20.0	20.0	
549C2:	İ	i i		i	i			İ	! 	İ
Marseilles	В	j j		None	i	None	Jan-Dec	>6.0	>6.0	
					[
549D2:										
Marseilles	В			None		None	Jan-Dec	>6.0	>6.0	
E40E.			 						 	
549F: Marseilles	 B		 	None	 	None	 Jan-Dec	 >6 0	 >6.0	
Maiscilles	ط _ا		, 	None		None	 am-nec	/0.0	/0.0	
549G:			! 		i				! 	
Marseilles	В			None		None	Jan-Dec	>6.0	>6.0	
11015011105										

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water ta	ble
Map symbol	Hydro-	Surface	Duration	Frequency	Duration	Frequency	Months	Upper	Lower	Kind of
and soil name	logic	water						limit	limit	water
	group	depth			<u> </u>					table
		Ft		[[Ft	Ft	
						[
554B:	!					!	!			
Kernan	C			None		None		0.5-2.0	1	
						ļ	Jun-Dec	>6.0	>6.0	
5.000										
560D2:	-									
St. Clair	D			None		None	Jan	>6.0	>6.0	Downhad
	l I	 			 		May-Dec	2.0-3.5	>6.0	
	 	 					May - Dec	20.0	70.0	
560E:	İ	 		1	 	 	 	 	 	
St. Clair	 D			None		None	 Jan	>6.0	>6.0	
501 01411	-							2.0-3.5		1
	i				i		May-Dec		>6.0	
	i			i	İ	i				i
567B:	i	j		İ	İ	İ	į	İ	i	į
Elkhart	В			None	i	None	Jan	>6.0	>6.0	
	İ				i	i	Feb-Apr	4.0-6.0	>6.0	Apparent
	ĺ						May-Dec	>6.0	>6.0	
572A:										
Loran	В			None		None	Jan-May	1.0-2.0	3.3-4.6	Perched
				None		None	Jun-Dec	>6.0	>6.0	
572B:	!					!	!			!
Loran	В			None		None		1.0-2.0		
							Jun-Dec	>6.0	>6.0	
572C2: Loran	 B	 		None	 	None	Ton More	1.0-2.0	12216	Domahad
rotan	-			None	 	None	Jun-Dec		>6.0	
	 	 					oun-bec	20.0	70.0	
614A:	l I	 		1	 	 	! 	 	 	
Chenoa	c			None		None	Jan-Mav	1.0-2.0	2.1-4.3	Perched
	i -				i		Jun-Dec		>6.0	
	İ			İ	İ	i	i	İ	i	i
614B:	İ	İ		İ	İ	i	i	İ	i	İ
Chenoa	C			None	i	None	Jan-May	1.0-2.0	2.1-4.3	Perched
	ĺ						Jun-Dec	>6.0	>6.0	
662B:										
Barony	В			None		None	Jan	>6.0	>6.0	
							-	2.0-3.5		Apparent
	!						May-Dec	>6.0	>6.0	
										!
663B:	-					 	-			
Clare	B			None		None	Jan	>6.0	>6.0	
							-	2.0-3.5		Apparent
	I I						May-Dec	>0.U	>6.0	
667B:	I I	 		I I	I I	I I	I I	 	I I	I I
оолв: Kaneville	 B	 		None	 	None	 Jan	 >6.0	 >6.0	
	-			None		None		2.0-3.5		Apparent
	İ						May-Dec		>6.0	
	İ			i	İ	i				
668B:	i			i	į	i	i	<u>.</u>	i	i
Somonauk	B			None		None	Jan	>6.0	>6.0	
	İ				i	i	Feb-Apr	2.0-3.5	>6.0	Apparent
	[i		j	i	j	May-Dec		>6.0	
	1	i i		I	I.	I.	I	I	I	I

Table 24.--Water Features--Continued

			Ponding		Floo	ding		1	Water ta	ble
Map symbol and soil name	logic	water	Duration	Frequency	Duration	Frequency	Months	Upper	Lower	Kind of water
	group	depth		<u> </u>	<u> </u>				<u> </u>	table
		Ft						Ft	Ft	
T. T. T. T. T. T. T. T. T. T. T. T. T. T										
575B:	5	 		Name .	l I	 	 Tam			
Greenbush	B			None	 	None	Jan	>6.0 4.0-6.0	>6.0 >6.0	Apparent
	 				 	 	May-Dec		>6.0	Apparent
	 				 	 	May - Dec	20.0	20.0	
75C2:	 				l I	 	 	i i	 	
Greenbush	 в	i i		None	 	None	 Jan	>6.0	>6.0	
	İ	i i			i		Feb-Apr	4.0-6.0	>6.0	Apparent
	İ	i i			i	i	May-Dec		>6.0	
	į	į į		į	İ	İ	į	Ì	j	j
79B:	ĺ	į į		İ	ĺ	ĺ	İ	ĺ	ĺ	İ
Blackberry	В			None		None	Jan	>6.0	>6.0	
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	
80B:	ļ			ļ.	!	ļ.	[ļ	
Campton	В			None		None	Jan	>6.0	>6.0	
								2.0-3.5		Apparent
						ļ	May-Dec	>6.0	>6.0	
12A:			D	 						
Spaulding	В/Д	0.0-0.5	Brief	Frequent		None		0.0-1.0		Apparent
	 						Jun-Dec	>6.0	>6.0	
15A:	 				l I	l I		l I	 	
Arrowsmith	। в			None	 	None	 .Tan_Mass	1.0-2.0	 >6.0	 Apparent
AIIOWBIII CII	5			None	l		Jun-Dec		>6.0	
	 	i i			I I	 		20.0	20.0	
32A:	 	i		i	İ		! 		 	
Appleriver	В	i i		None	i	None	Jan-May	1.0-2.0	3.3-5.5	Perched
	į	i i			i	i	Jun-Dec	>6.0	>6.0	
	į	į į		į	İ	İ	į	Ì	j	j
32B:										
Appleriver	В			None		None	Jan-May	1.0-2.0	3.3-5.5	Perched
							Jun-Dec	>6.0	>6.0	
91A:										
Rush	В			None		None	Jan-Dec	>6.0	>6.0	
				!						
91B:										
Rush	B			None		None	Jan-Dec	>6.0	>6.0	
003										
92A: Bowes	 B			None	 	 None	 Jan-Dec	 >6 0	>6 0	
bowes	-			None		None	Jan-Dec	>0.0	>6.0	
92B:	 				 	 	 	 	 	
Bowes	 в	i i		None		None	Jan-Dec	>6.0	>6.0	
2005	-	i			İ					
94G:	İ	i i		i	İ	İ	i	i	İ	<u> </u>
Marseilles	В	i i		None	i	None	Jan-Dec	>6.0	>6.0	
	į	i i		į	İ	İ	į	į	į	į
Northfield	D			None		None	Jan-Dec	>6.0	>6.0	
	ĺ	į į		İ	ĺ	ĺ	İ	ĺ	ĺ	İ
Ritchey	D	i i		None	i	None	Jan-Dec	>6.0	>6.0	i
		l İ		1	[
02B:		l İ		1						
Orthents, loamy	В			None		None	Jan	>6.0	>6.0	
							-		3.7-5.5	Perched
							May-Dec	>6.0	>6.0	
	I							1		

Table 24.--Water Features--Continued

	1		Ponding		Floo	ding	I		Water ta	ble
Map symbol	Hydro-	Surface	Duration	Frequency	Duration	Frequency	Months	Upper	Lower	Kind of
and soil name	logic	water						limit	limit	water
	group	depth		I						table
		Ft						Ft	Ft	
802D:										
Orthents, loamy	В			None		None	Jan	>6.0	>6.0	
							Feb-Apr	3.5-5.0	3.7-5.5	Perched
							May-Dec	>6.0	>6.0	
804D:										
Orthents, acid	C			None		None		>6.0	>6.0	
							: -	3.5-5.0		
							May-Dec	>6.0	>6.0	
804G:										
Orthents, acid	C			None		None	Jan	>6.0	>6.0	
							Feb-Apr	3.5-5.0	3.7-5.5	Perched
							May-Dec	>6.0	>6.0	
805B:										
Orthents, clayey	C			None		None	Jan	>6.0	>6.0	
							Feb-Apr	2.0-3.5	2.2-4.0	Perched
							May-Dec	>6.0	>6.0	
814A:										
Muscatune	В			None		None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	
Buckhart	В			None		None	Jan	>6.0	>6.0	
	ĺ						Feb-Apr	2.0-3.5	>6.0	Apparent
	ĺ						May-Dec	>6.0	>6.0	
	İ	İ	İ	İ	İ	İ	į	İ	Ì	İ
817A:	İ	İ	İ	İ	İ	İ	į	İ	İ	İ
Channahon	D			None	i	None	Jan-Dec	>6.0	>6.0	
	İ	İ	İ	İ	İ	İ	į	İ	Ì	İ
Hesch	В			None	i	None	Jan-Dec	>6.0	>6.0	
	İ	ĺ	ĺ	İ	ĺ	ĺ	İ	ĺ	ĺ	İ
817B:	ĺ	İ		İ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
Channahon	D			None		None	Jan-Dec	>6.0	>6.0	
	İ	İ	İ	İ	İ	İ	į	İ	Ì	İ
Hesch	В			None		None	Jan-Dec	>6.0	>6.0	
	ĺ	İ		İ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
818A:	ĺ	İ		İ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
Flanagan	В			None		None	Jan-May	1.0-2.0	3.7-5.4	Apparent
	İ						Jun-Dec	>6.0	>6.0	
	ĺ	İ		İ	ĺ	ĺ	İ	ĺ	ĺ	ĺ
Catlin	В			None		None	Jan	>6.0	>6.0	
	İ				i		Feb-Apr	2.0-3.5	3.5-5.5	Apparent
	İ				i		May-Dec			
	İ	İ	İ	İ	İ	İ	į	İ	Ì	İ
820E:	i	İ	İ	į	İ	į	i	İ	i	i
Hennepin	В	i	i	None	i	None	Jan-Dec	>6.0	>6.0	j
-	i	İ	İ	į	İ	į	i	İ	i	i
Casco	В	i	i	None	i	None	Jan-Dec	>6.0	>6.0	j
	i	İ	İ	i	İ	i	i	İ	İ	i
820G:	i	İ	İ	i	İ	i	i	İ	İ	i
Hennepin	В		i	None	i	None	Jan-Dec	>6.0	>6.0	
•	i	İ			İ	İ			İ	i
Casco	В		i	None	i	None	Jan-Dec	>6.0	>6.0	
			İ		İ					
830:	i		İ	i	İ	İ	i		İ	İ
Landfills	c			None		None	Jan-Dec	>6.0	>6.0	
	i		İ		İ					i
864.	i		İ			İ	i		İ	İ
Pits, quarry	i		İ	i	İ	i	i		İ	i
,	i		İ	i	İ	i	i		İ	i
	I	1	I	I	I	I	I	I	I	I

Table 24.--Water Features--Continued

			Ponding		Floo	ding			Water ta	ble
Map symbol	Hydro-	Surface	Duration	Frequency	Duration	Frequency	Months	Upper	Lower	Kind of
and soil name	logic	water						limit	limit	water
	group	depth								table
		Ft		I		1		Ft	Ft	
265										
865.		!!!								
Pits, gravel	l I	 		 	 	 	 		 	
969E2:				i	 	i				
Casco	В	i i		None		None	Jan-Dec	>6.0	>6.0	i
Rodman	A			None		None	Jan-Dec	>6.0	>6.0	
969F:	5			N			 Tam Dam			
Casco	B			None		None	Jan-Dec	>6.0	>6.0	
Rodman	l A			None	 	None	 Jan-Dec	 >6 0	 >6.0	
Kodilari	^	 		140116	 	None	ban-bec	20.0	20.0	
1103A:	i	i i		i		İ	<u> </u>			
Houghton	A/D	0.0-1.0	Long	Frequent		None	Jan-Dec	0.0-0.5	>6.0	Apparen
	İ	į į		į	İ	İ	į	İ	İ	
1480A:		į į		İ	ĺ	İ	ĺ			
Moundprairie	B/D	0.0-1.0	Long	Frequent	Brief	Frequent	Jan-Dec	0.0-0.5	>6.0	Apparent
				1		[
3073A:							_			
Ross	В			None	Brief	Frequent	Jan	>6.0	>6.0	
		 			 		reb-Apr May-Dec	4.0-6.0	>6.0 >6.0	Apparent
	l I						May-Dec	>0.0	>0.0	
3076A:	 				 	l I	 	 	 	
Otter	B/D	0.0-0.5	Brief	Frequent	Brief	Frequent	Jan-May	0.0-1.0	>6.0	Apparent
	, <i>'</i>						Jun-Dec		>6.0	
	İ	i i		į	İ	İ	į		İ	İ
3082A:		į į		İ	ĺ	İ	ĺ			
Millington	B/D	0.0-0.5	Brief	Frequent	Brief	Frequent	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	
3107A:	_ /_			!		!				.
Sawmill	В/Д	0.0-0.5	Brief 	Frequent	Brief	Frequent				Apparent
	 						Jun-Dec	>0.0	>6.0	
3321A:					 	 	 			
Du Page	l B	i i		None	Brief	Frequent	 Jan	>6.0	>6.0	
3	i	i i						4.0-6.0		Apparent
	İ	i i					May-Dec		>6.0	
		į į		İ	ĺ	İ	ĺ			
3451A:										
Lawson	В			None	Brief	Frequent	-			Apparent
							Jun-Dec	>6.0	>6.0	
24003										
3480A: Moundprairie	 p/n	 0.0-0.5	Brief	 Frequent	 Brief	 Frequent	 Jan-May	0.10	 	 Apparent
Moundprairie	ע / פ		Prier	Frequenc		Frequenc	Jun-Dec		>6.0 >6.0	Apparent
				İ	 			20.0	20.0	
3800A:	İ	į į		i	İ	i	<u>.</u>		İ	<u> </u>
Psamments	A	i i		None	Brief	Frequent	Jan	>6.0	>6.0	
		i i		j		j	Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	
				1		[
7073A:				ļ.		ļ				
Ross	В			None	Brief	Rare	Jan	>6.0	>6.0	
							Feb-Apr May-Dec	4.0-6.0	>6.0 >6.0	Apparent

Table 24.--Water Features--Continued

			Ponding	ī	Floo	ding		Water table		
Map symbol	Hydro-	Surface	Duration	Frequency	Duration	Frequency	Months	Upper	Lower	Kind o
and soil name	logic	water		İ	ĺ	İ	ĺ	limit	limit	water
	group	depth		İ	İ	İ	İ	İ	Ì	table
	İ	Ft		İ	İ	Ī	ĺ	Ft	Ft	İ
8073A:					 			l I		
Ross	l B			None	 Brief	Occasional	 Jan	 >6.0	 >6.0	
ROSS	B	! !								1
	1						Feb-Apr			Apparent
					 		May-Dec	>6.0 	>6.0	
8107A:				i	! 	i	! 			!
Sawmill	B/D	0.0-0.5	Brief	Frequent	Brief	Occasional	Jan-May	0.0-1.0	>6.0	Apparent
	İ					ļ	Jun-Dec	>6.0	>6.0	
8151A:					 		 	 	 	
Ridgeville	В	i i		None	 Brief	Occasional	∣ .Tan-Mav	 1 0-2 0	>6.0	Apparent
RIUGOVIIIO	-					1	Jun-Dec		>6.0	
				ļ.		ļ.			!	!
8404A:				ļ						
Titus	C/D	0.0-0.5	Brief	Frequent	Brief	Occasional		•		Apparent
					 		Jun-Dec	>6.0	>6.0	
8451A:					 		 	 		
Lawson	В	i i		None	Brief	Occasional	Jan-May	1.0-2.0	>6.0	Apparent
	į						Jun-Dec	>6.0	>6.0	
8516A:				1	 		 	 	[[[[
Faxon	B/D	0.0-0.5	Brief	Frequent	Brief	Occasional	Jan-Mav	0.0-1.0	1.7-3.3	Perched
-	-/-						Jun-Dec		>6.0	

Table 25.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol	Rest	rictive	layer	Subsid	dence	 Potential	Risk of corrosion		
and soil name		Depth				for	Uncoated	I	
	Kind	to top	Hardness	Initial	Total	frost action	steel	Concrete	
		In		In	In				
23B:	 		 			 	 	 	
Blount	Dense material	30-48	Noncemented	ļ j		High	High	Low	
51A:] 	 		
Muscatune						High	High	Moderate	
60C2:						 	 		
La Rose						Moderate	Moderate	Low	
60D2:						İ			
La Rose						Moderate	Moderate	Low	
61A:		İ							
Atterberry	 		 			High	High 	Moderate	
61B:									
Atterberry	 		 		 	High 	High 	Moderate	
67A:						į			
Harpster	 				 	High 	High 	Low	
68A:		į		į į		į			
Sable	 					High 	High 	Moderate	
86B:	į	į		į į		į			
Osco	 					High 	Moderate	Moderate	
86C2:		į		į į					
Osco	 					High 	Moderate	Moderate	
87A: Dickinson					 	 Moderate	Low	 Moderate	
DICKINSON						Moderate	LTOW	Moderate	
87B: Dickinson					 	 Moderate	Low	 Moderate	
PICKINGOII					- 	Hoderate	 TOM	HOUGE ALE	
87C2: Dickinson					 	 Moderate	Low	 Moderate	
DIGITION									
88B: Sparta					 	Low	Low	 High	
5Pat ca	- 		==== 		- 				

Map symbol	Rest	rictive	layer	Subsid	lence	Potential	Risk of	corrosion
and soil name	 Kind	Depth	Hardness	 Initial	Total	for for frost action	Uncoated steel	Concrete
	KING	In	nardness	In	In		steel	
88D:	 			 			 	
Sparta	 		i	i i		Low	Low	High
91A:								
Swygert	Dense material	35-55	Noncemented	 		Moderate	High 	Low
91B: Swygert	 Dense material	35-55	 Noncemented			 Moderate	 High	Low
91B2: Swygert	 Dense material	35-55	 Noncemented	 		 Moderate	 High	Low
91C2: Swygert	 Dense material	35-55	 Noncemented	 		 Moderate	 High	Low
91C3: Swygert	 Dense material	20-40	 Noncemented	 		 Moderate	 High	Low
103A: Houghton	 		 	 6-18	55-60	 High	 High	 High
104A: Virgil	 		 	 		 High 	 High	 Moderate
105A: Batavia	 		 	 		 High 	 High 	 Moderate
105B: Batavia	 		 	 		 High 	 High 	 Moderate
105C2: Batavia	 		 	 		 High 	 High 	 Moderate
125A: Selma	 		 	 		 High	 High	Low
131B: Alvin	 			 		 Moderate	 Low	 High
131C2: Alvin	 		 	 		 Moderate 	 Low	 High
132A: Starks	 		 	 		 High 	 High 	 Moderate

Table 25.--Soil Features--Continued

Table 25.--Soil Features--Continued

Map symbol	Rest	rictive	layer	Subsid	dence	 Potential	Risk of corrosion		
and soil name	Kind	Depth to top	Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete	
	[In	[In	In	İ		ļ.	
134A: Camden	 	 	 		 	 High	 Moderate	 Moderate	
134B: Camden	 	 	 		 	 High	 Moderate 	 Moderate 	
134C2: Camden	 	 	 		 	 High	 Moderate 	 Moderate 	
134D2: Camden	 	 	 	 	 	 High 	 Moderate 	 Moderate 	
134D3: Camden	 	 	 	 	 	 High 	 Moderate 	 Moderate 	
134F: Camden	 	; 	 	 	 	 High 	 Moderate 	 Moderate 	
146A: Elliott	 Dense material	20-45	 Noncemented		 	 Moderate	 High 	 Low 	
146B: Elliott	 Dense material	20-45	 Noncemented		 	 Moderate	 High 	Low	
146B2: Elliott	 Dense material	20-45	 Noncemented		 	 Moderate	 High 	Low	
147B2: Clarence	 Dense material	25-40	 Noncemented		 	 Moderate	 High 	 Moderate	
148A: Proctor	 	 	 	 	 	 High 	 Moderate 	 Moderate 	
148B: Proctor	 	 	 		 	 High	 Moderate 	 Moderate	
148C2: Proctor	 	 	 		 	 High 	 Moderate 	 Moderate 	
149A: Brenton	 	 	 		 	 High 	 High 	 Moderate 	
151A: Ridgeville	 	 	 	 	 	 Moderate 	 Moderate 	 Moderate 	

	Res	strictive la	ayer	Subsidence			Risk of corrosion		
Map symbol			•	_i		Potential			
and soil name		Depth				for	Uncoated		
	Kind	to top	Hardness	Initial	Total	frost action	steel	Concrete	
		In		In	In				
151B:									
Ridgeville						Moderate	Moderate	Moderate	
1523									
152A:						 High	 High	Moderate	
Drummer						High 	High 	Moderate	
154A:		i		i		Ì			
Flanagan		i i		i i		High	High	Moderate	
į		i i		i i		j		İ	
171A:									
Catlin						High	High	Moderate	
171B:		!!!		!!!					
Catlin						High	High	Moderate	
171B2:						1		1	
Catlin		i i		i i		High	 High	Moderate	
		i i		i i					
171C2:		i i		i i		j	ĺ	İ	
Catlin						High	High	Moderate	
171C3:									
Catlin						High	High	Moderate	
193C2:						1			
Mayville						 High	 High	Moderate	
Mayviiie								Inoderace	
198A:		i		i i					
Elburn		i i		i i		High	High	Moderate	
į		i i		i i				İ	
199A:									
Plano						High	Moderate	Moderate	
1000									
199B: Plano						 High	 Moderate	 Moderate	
riano						High	Moderace	Moderace	
199C2:						i			
Plano				i i		High	Moderate	Moderate	
į		i i		i i		į		į	
206A:		i i		i i					
Thorp						High	High	Moderate	
210A:					FF 60	 TT ! 1:	 	 	
Lena				6-18	55-60	High	High	Low	

Table 25.--Soil Features--Continued

Table 25.--Soil Features--Continued

Map symbol	Res	trictive	layer	Subsid	dence	 Potential	Risk of corrosion		
and soil name	Kind	Depth to top	Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete	
		In	Hardness	In	In				
219A: Millbrook	 		 		 	 High	 High	 Moderate	
223B: Varna	 Dense material	24-60	 Noncemented		 	 Moderate	 High	 Moderate	
223B2: Varna	 Dense material	24-60	 Noncemented		 	 Moderate	 High	 Moderate	
223C2: Varna	 Dense material	24-60	 Noncemented		 	 Moderate	 High	 Moderate	
223C3: Varna	 Dense material	18-36	 Noncemented		 	 Moderate	 High	 - Low	
223D2: Varna	 Dense material	24-60	 Noncemented		 	 Moderate	 High	 Moderate	
223D3: Varna	 Dense material 	18-36	 Noncemented		 	 Moderate	 High 	Low	
228B: Nappanee	 Dense material 	30-60	 Noncemented		 	 High	 High 	Low	
228C2: Nappanee	 Dense material 	24-60	 Noncemented		 	 High	 High	Low	
228C3: Nappanee	 Dense material 	20-50	 Noncemented		 	 High	 High	Low	
232A: Ashkum	 		 		 	 High	 High	Low	
233A: Birkbeck	 		 		 	 High	 High	 High	
233B: Birkbeck	 		 		 	 High 	 High 	 High 	
233C2: Birkbeck	 		 		 	 High 	 High 	 High 	
234A: Sunbury	 		 		 	 Moderate 	 High 	 Moderate 	

	Rest	rictive	layer	Subsid	lence	<u> </u>	Risk of	corrosion
Map symbol	İ		_	İ		Potential	İ	
and soil name		Depth				for	Uncoated	1
	Kind	to top	Hardness	Initial	Total	frost action	steel	Concrete
	<u>'</u>	In	İ	In	In	İ	İ	İ
			i			i I	 	i
235A:	 					l I	! 	
Bryce	! 					 High	 High	Low
21700	 	l I	 			9		1011
236A:	 	l l				 	 	
Sabina	! 					 High	 High	 High
Dabina	 	I	1		 	111911	111911	111911
238A:	 	l I	l I			l I	l I	I I
Rantoul	 	 				 *** ***	 ***!1-	
Rantoui						High	High	Low
0.44.50				!				
241C3:				!				1-
Chatsworth	Dense material	10-24	Noncemented			Moderate	High	Low
241D3:		ļ	!			!		!
Chatsworth	Dense material	10-24	Noncemented			Moderate	High	Low
241E3:								
Chatsworth	Dense material	10-24	Noncemented			Moderate	High	Low
241F:								
Chatsworth	Dense material	10-24	Noncemented			Moderate	High	Low
241G:								
Chatsworth	Dense material	10-24	Noncemented			Moderate	High	Low
242A:								
Kendall						High	High	High
243A:								
St. Charles						High	Moderate	High
	İ	İ	İ	į i		İ	İ	İ
243B:	İ	İ	į	į į		İ	İ	İ
St. Charles	i					High	Moderate	High
	İ	İ	į	į i		i	İ	i
243C2:	İ	İ	į	į i		İ	İ	i
St. Charles	i					High	Moderate	High
		İ	i	į i		i	i I	i
244A:		İ	i	į i		İ	i I	i
Hartsburg						High	 High	Low
-	İ	i	i	i i		i	İ	
278A:	 	İ	i			İ	i I	i
Stronghurst	! 				 	 High	 High	Moderate
20-0119114150	! 	i I	! 		! 	3**	:::	
278B:	 	1	 			1 	 	
Stronghurst	 		 		 	 High	 High	Moderate
5010mgmar 50	 	- 	 		- 	 	••• • • • • • • • • • • • • • • • • •	1100001000
	I	I	I	1	I	I	I	I

Table 25.--Soil Features--Continued

Table 25.--Soil Features--Continued

Map symbol	Res	trictive	layer	Subsid	lence	 Potential	Risk of	corrosion
and soil name		Depth		_ i i		for	Uncoated	
	Kind	to top	Hardness	Initial	Total	frost action	steel	Concrete
		In		In	In		 	
279B:							 	
Rozetta						High	Moderate	High
280C2:		İ						
Fayette						High	Moderate	High
90A:		İ						
Warsaw						Moderate	Moderate	Moderate
290B:		i						
Warsaw						Moderate	Moderate	Moderate
290C2:				į į				
Warsaw			 			Moderate	Moderate	Low
293A:		į		į į				
Andres			 			Moderate	High 	Low
293B:		į						
Andres			 			Moderate	High 	Low
294B:		į		į į				
Symerton			 			Moderate	High 	Moderate
294C2:		į						
Symerton			 			Moderate	High 	Moderate
295A:		į	į	į į				į
Mokena	Dense material	30-60	Noncemented			Moderate	High 	Low
295B:		į	į	į į				į
Mokena	Dense material	30-60	Noncemented			Moderate	High 	Low
298B:		į	į	į į				į
Beecher	Dense material	24-45	Noncemented			High	High 	Low
311B:		į						
Ritchey	Lithic bedrock	10-20	Indurated			Moderate	Moderate	Moderate
314A:		į						
Joliet	Lithic bedrock	10-20	Indurated			High	High 	Low
315B:				į i				
Channahon	Lithic bedrock	10-20	Indurated			Moderate	Moderate	Low

Map symbol	Rest	crictive	layer	Subsid	lence	 Potential	Risk of	corrosion
and soil name	 Kind	Depth	Hardness	 	Total	for frost action	Uncoated steel	Concrete
		In		In	In			<u> </u>
317A: Millsdale	 Lithic bedrock	20-40	 Indurated			 High	 High	 - Low
318B: Lorenzo	 		 			 Moderate	 Moderate 	 Moderate
318C2: Lorenzo	 		 			 Moderate	 Moderate 	 Moderate
320B: Frankfort	 Dense material	24-42	 Noncemented			 High	 High	 Low
320C2: Frankfort	 Dense material	24-42	 Noncemented			 High	 High	 Low
325B: Dresden	 		 			 Moderate	 Moderate	 Moderate
325C2: Dresden	 		 			 Moderate	 Moderate 	 Moderate
327B: Fox			 			 Moderate	 Moderate 	 Moderate
327C2: Fox			 			 Moderate	 Moderate 	 Moderate
327D2: Fox			 			 Moderate	 Moderate 	 Moderate
330A: Peotone	 		 			 High 	 High 	Low
344A: Harvard			 			 High	 Moderate 	 Moderate
344B: Harvard	 		 			 High	 Moderate	 Moderate
344C2: Harvard	 		 			 High 	 Moderate 	 Moderate
356A: Elpaso	 		 			 High 	 High 	 Low

Table 25.--Soil Features--Continued

Table 25.--Soil Features--Continued

Map symbol	Rest	rictive	layer	Subsid	dence	 Potential	Risk of	corrosion
and soil name	 Kind	Depth	Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete
	KING	to top	naruness	Initial	Total In		sreel	Concrete
375A: Rutland	 Dense material	 40-60	 Noncemented		 	 Moderate	 High	 Moderate
375B: Rutland	 Dense material	 40-60	 Noncemented			 Moderate	 High	 Moderate
375B2: Rutland	 Dense material	 40-60	 Noncemented			 Moderate	 High	 Moderate
388B: Wenona	 Dense material	 40-65	 Noncemented		 	 Moderate	 High	 Moderate
388B2: Wenona	 Dense material	 40-65	 Noncemented			 Moderate	 High 	 Moderate
388C2: Wenona	 Dense material	40-65	 Noncemented			 Moderate	 High 	 Moderate
397F: Boone	 Paralithic bedrock	 20-40 	 Moderately cemented			 Low 	 Low 	 Moderate
413B: Gale	 Paralithic bedrock	 20-40 	 Moderately cemented			 High 	 Moderate 	 High
413C2: Gale	 Paralithic bedrock	 20-40 	 Moderately cemented		 	 High 	 Moderate 	 High
435A: Streator	 	 	 			 High	 High	 Low
448B: Mona	 Dense material	36-54	 Noncemented 			 Moderate	 High 	 Moderate
448C2: Mona	 Dense material	36-54	 Noncemented 			 Moderate	 High 	 Moderate
512B: Danabrook	 	 	 		 	 High 	 High 	 Moderate
512C2: Danabrook	 	 	 		 	 High 	 High 	 Moderate

Table 25.--Soil Features--Continued

Map symbol	Res	trictive	layer	Subsid	lence	Potential	Risk of	corrosion
and soil name	Kind	Depth	 Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete
	KING	In	naruness	In	In		sceei	Concrete
516A: Faxon	 - Tithic bedrock	20-40	 Strongly cemented	 		 High	 High	 High
527C2: Kidami	 			 		 Moderate	 High	 Moderate
527D2: Kidami	 			 		 Moderate	 High	 Moderate
530B: Ozaukee	 Dense material	20-45	Noncemented	 		 Moderate	 High 	 Low
530C2: Ozaukee	 Dense material	20-45	 Noncemented	 		 Moderate	 High	 Low
530C3: Ozaukee	 -		 Noncemented	 		 Moderate	 High	 Low
Ozaukee	Dense Maceriai	20-45	Noncemented			Moderate	HIGH	LTOM
530D2: Ozaukee	 Dense material	20-45	 Noncemented	 		 Moderate	 High	Low
530D3: Ozaukee	 Dense material	20-45	 Noncemented	 		 Moderate	 High	 Low
530E2: Ozaukee	 Dense material	 20-45	 Noncemented	 		 Moderate	 High	 Low
				İ				
530F: Ozaukee	 Dense material	20-45	 Noncemented	 		 Moderate	 High 	 Low
541B: Graymont				 		 High	 High	 Moderate
541B2: Graymont	 		 	 		 High	 High	 Moderate
541C2: Graymont	 			 		 High	 High	 Moderate
GLaymonc							 	Moderate
542A: Rooks	 			 		 High	 High 	 Moderate
542B: Rooks				 		 High	 High	 Moderate

Table 25.--Soil Features--Continued

Map symbol	Res	trictive	layer	Subsid	dence	 Potential	Risk of corrosion	
and soil name		Depth	<u> </u>			for	Uncoated	<u> </u>
	Kind	to top	Hardness	Initial		frost action	steel	Concrete
	1	In		In	In		l I	
549B:								
Marseilles	Paralithic bedrock	20-40	Moderately cemented			High 	Moderate 	High
549C2:							 	
Marseilles	Paralithic bedrock	20-40	Moderately cemented			High 	Moderate	High
549D2:							 	
Marseilles	Paralithic bedrock	20-40	Moderately cemented	j j		High 	Moderate	High
549F:	 						 	
Marseilles	Paralithic bedrock	20-40	Moderately cemented	j j		High	Moderate	High
549G:	 						 	
Marseilles	Paralithic bedrock	20-40	Moderately cemented			High 	Moderate	High
554B:								
Kernan	Dense material	40-60	Noncemented			High	High	Moderate
560D2:	 						 	
St. Clair	Dense material	20-48	Noncemented			Moderate	High	Low
560E:	 						 	
St. Clair	Dense material	20-48	Noncemented			Moderate	High	Low
567B:	 						 	
Elkhart						High	High	Low
572A:	 		 				 	
Loran	Paralithic bedrock	40-60	Moderately cemented			High 	 High 	Low
572B:] 				 	
Loran	Paralithic bedrock	40-60	Moderately cemented			High 	 High 	Low
572C2:] 				 	
Loran	Paralithic bedrock	40-60	Moderately cemented			High 	 High 	Low
514A:]		 		 	
Chenoa	ļ			ļ ļ		Moderate	High	Moderate

	D ₂	estrictive	laver	Subsid	dence	1	Risk of	corrosion
Map symbol		SECTIONIVE	layer	Bubbit	261106	Potential	KISK OI	COTTOBION
and soil name		Depth			1	for	Uncoated	1
	Kind	to top	Hardness	Initial	Total	frost action		Concrete
		In		In	In	i i	<u> </u>	İ
	İ	į	İ	Ì	İ	İ	İ	İ
614B:								
Chenoa						Moderate	High	Moderate
		ļ		ļ		ļ		
662B:	 				 	 *** 'b		 Madamaka
Barony	 					High	High	Moderate
663B:	 	i		ł	 	I I	 	I
Clare						High	 High	Moderate
		į		i	i		İ	
667B:	İ	İ		į		İ	ĺ	İ
Kaneville						High	High	Moderate
		ļ		ļ				
668B: Somonauk	 				 	 *** 'b		 Madamaka
Somonauk	 					High	High	Moderate
675B:		İ		i	l I		 	
Greenbush		i		i		High	Moderate	High
	İ	į		Ì	İ	i	İ	i
675C2:				1				
Greenbush						High	Moderate	High
5505		ļ		ļ				
679B:	 				 	 *** 'b		126-2
Blackberry	 					High	High 	Moderate
680B:		İ		i	l I		 	
Campton		i		i		High	High	High
_	İ	j	İ	Ì	İ	į	j	į
712A:								
Spaulding						High	High	Low
		ļ		ļ				
715A: Arrowsmith	 				 	 High	 High	Low
AIIOWSMICH	 					mign	mign	LTOM
732A:	 	i		ì		Ì	! 	
Appleriver	Paralithic	40-60	Moderately	i		High	High	Moderate
	bedrock	İ	cemented	į		İ	ĺ	İ
732B:				ļ				
Appleriver	•	40-60	Moderately			High	High	Moderate
	bedrock		cemented	[1	 	1
791A:	1 			}	 		I 	
Rush						High	Moderate	 High
			İ	i	İ	į	İ	į
791B:		İ		į				
Rush						High	Moderate	High

Table 25.--Soil Features--Continued

Map symbol	Rest	rictive	layer	Subsid	lence	 Potential	Risk of corrosion	
and soil name	Kind	Depth	Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete
		In		In	In			
792A: Bowes	 		 	 		 High	 Moderate	 Moderate
792B: Bowes	 		 	 		 High	 Moderate 	 Moderate
794G: Marseilles	 Paralithic bedrock	20-40	 Moderately cemented	 		 High 	 Moderate 	 High
Northfield	Lithic bedrock	10-20	 Strongly cemented			Moderate	 Low	High
Ritchey	 Lithic bedrock	10-20	 Indurated			Moderate	 Moderate	Low
802B: Orthents, loamy	 		 	 		 Moderate	 Moderate 	 Moderate
802D: Orthents, loamy	 		 	 		 Moderate	 Moderate 	 Moderate
804D: Orthents, acid	 		 	 		 Moderate	 High	 High
804G: Orthents, acid	 		 	 		 Moderate	 High	 High
805B: Orthents, clayey	 		 	 		 Moderate	 High	 Moderate
814A: Muscatune	 		 	 		 High	 High	 Moderate
Buckhart	 		 I	 		High	 High 	 Moderate
817A: Channahon	 Paralithic bedrock	 10-20 	 Moderately cemented	 		 Moderate 	 Low 	 Moderate
Hesch	 Paralithic bedrock	 20-40 	 Moderately cemented	 		 Moderate 	 Low 	 High
817B: Channahon	 Paralithic bedrock	 10-20 	 Moderately cemented 	 		 Moderate 	 Low 	 Moderate

Map symbol	Rest	crictive	layer	Subsid	dence	 Potential	Risk of	corrosion
and soil name	Kind	Depth to top	 Hardness	 Initial	 Total	for frost action	Uncoated steel	Concrete
	1	In		In	In			
817B: Hesch	 Paralithic bedrock	20-40	 Moderately cemented	 		 Moderate 	 Low 	 Moderate
318A: Flanagan	 		 			 High	 High	 Moderate
Catlin	 					 High	 High	Moderate
820E: Hennepin	 	 	 			 Moderate	 Low	Low
Casco						 Moderate	 Moderate	Low
820G: Hennepin	 		 			 Moderate	 Low	Low
Casco						 Moderate	 Moderate	Low
830. Landfills	 		 			 	 	
864. Pits, quarry	 		 			 	 	
865. Pits, gravel	 		 			 	 	
969E2: Casco	 		 			 Moderate	 Moderate	Low
Rodman						Low	 Low	Low
969F: Casco	 		 			 Moderate	 Moderate	Low
Rodman						Low	 Low	Low
1103A: Houghton	 		 	6-18	 55-60	 High	 High	 High
1480A: Moundprairie	 		 			 High	 High	Low

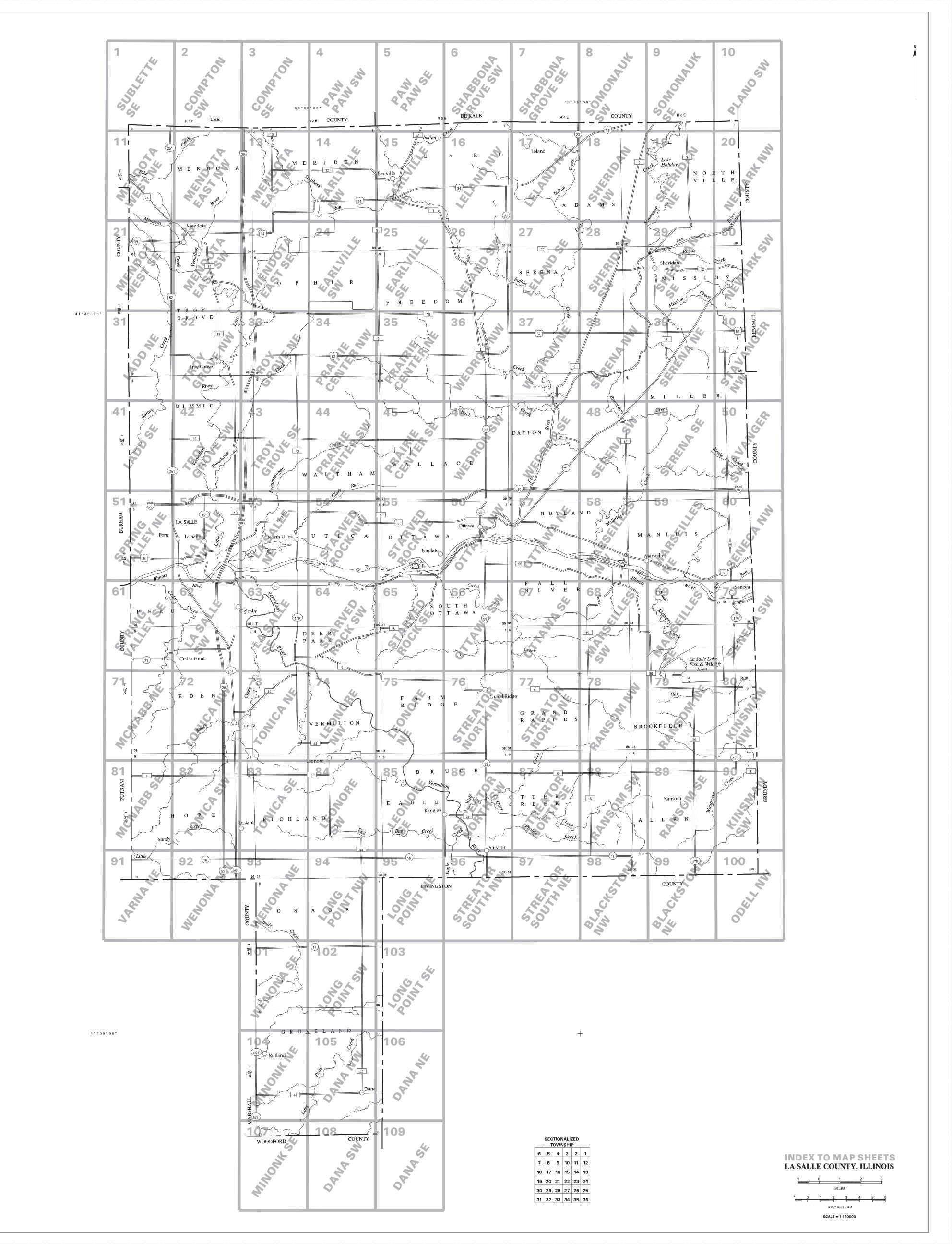
Table 25.--Soil Features--Continued

Table 25.--Soil Features--Continued

Map symbol	Rest	rictive	layer	Subsid	dence	 Potential	Risk of corrosion	
and soil name	 Kind	Depth to top	Hardness	 Initial	Total	for frost action	Uncoated steel	Concrete
		In		In	In	İ	<u> </u>	
3073A: Ross	 	 	 			 Moderate	 Low	 Low
3076A: Otter	 	 	 			 High	 High	 Low
3082A: Millington	 	 	 	 		 High	 High	 Low
3107A: Sawmill	 		 	 	 	 High	 High	 Low
3321A: Du Page	 	 	 	 		 Moderate	 Low	 Low
3451A: Lawson	 		 	 		 High	 High	 Low
3480A: Moundprairie	 	 	 	 		 High	 High	 Low
3800A: Psamments	 		 	 		 - Low	 High 	 Moderate
7073A: Ross	 	 	 			 Moderate	 Low 	 Low
8073A: Ross	 	 	 	 	 	 Moderate	 Low 	 Low
8107A: Sawmill	 	 	 		 	 High	 High	 Low
8151A: Ridgeville	 	 	 			 Moderate	 Moderate 	 Moderate
8404A: Titus	 	 	 	 		 High 	 High 	 Low
8451A: Lawson	 	 	 	 		 High	 High	 Low
8516A: Faxon	 Lithic bedrock	 20-40	 Strongly cemented 	 	 	 High 	 High 	 High

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SOIL LEGEND

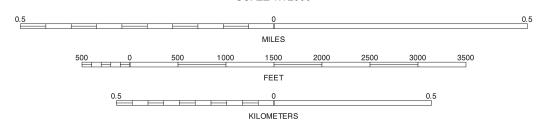
Map unit symbols consist of a combination of numbers and letters. The initial numbers represent the kind of soil or miscellaneous area. An uppercase letter following these numbers indicates the class of slope. A final number of 2 following the slope class letter indicates that the soil is moderately eroded, and a final number of 3 indicates that the soil is severely eroded. Symbols that do not have a final number of 2 or 3 following a slope class letter indicate map units that are not eroded or are only slightly eroded. Symbols for miscellaneous areas do not have a slope class letter.

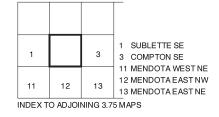
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
23B	Blount silt loam, 2 to 4 percent slopes	233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded	541B	Graymont silt loam, 2 to 5 percent slopes
51A	Muscatune silt loam, 0 to 2 percent slopes	234A	Sunbury silt loam, 0 to 2 percent slopes	541B2	Graymont silt loam, 2 to 5 percent slopes, eroded
60C2	La Rose loam, 5 to 10 percent slopes, eroded	235A	Bryce silty clay, 0 to 2 percent slopes	541C2 542A	Graymont silt loam, 5 to 10 percent slopes, eroded
60D2	La Rose loam, 10 to 18 percent slopes, eroded	236A	Sabina silt loam, 0 to 2 percent slopes	542A 542B	Rooks silty clay loam, 0 to 2 percent slopes Rooks silty clay loam, 2 to 5 percent slopes
61A 61B	Atterberry silt loam, 0 to 2 percent slopes	238A 241C3	Rantoul silty clay, 0 to 2 percent slopes	549B	Marseilles silt loam, 2 to 5 percent slopes
67A	Atterberry silt loam, 2 to 5 percent slopes Harpster silty clay loam, 0 to 2 percent slopes	241D3	Chatsworth silty clay, 4 to 6 percent slopes, severely eroded Chatsworth silty clay, 6 to 12 percent slopes, severely eroded	549C2	Marseilles silt loam, 5 to 10 percent slopes, eroded
68A	Sable silty clay loam, 0 to 2 percent slopes	241E3	Chatsworth silty clay, 12 to 20 percent slopes, severely eroded	549D2	Marseilles silt loam, 10 to 18 percent slopes, eroded
86B	Osco silt loam, 2 to 5 percent slopes	241F	Chatsworth silty clay loam, 20 to 30 percent slopes	549F	Marseilles silt loam, 18 to 35 percent slopes
86C2	Osco silt loam, 5 to 10 percent slopes, eroded	241G	Chatsworth silty clay loam, 30 to 50 percent slopes	549G	Marseilles silt loam, 35 to 60 percent slopes
87A	Dickinson sandy loam, 0 to 2 percent slopes	242A	Kendall silt loam, 0 to 2 percent slopes	554B	Kernan silt loam, 2 to 4 percent slopes
87B	Dickinson sandy loam, 2 to 5 percent slopes	243A	St. Charles silt loam, 0 to 2 percent slopes	560D2 560E	St. Clair silty clay loam, 6 to 12 percent slopes, eroded St. Clair silty clay loam, 12 to 20 percent slopes
87C2	Dickinson sandy loam, 5 to 10 percent slopes, eroded	243B	St. Charles silt loam, 2 to 5 percent slopes	567B	Elkhart silt loam, 2 to 5 percent slopes
88B 88D	Sparta loamy sand, 1 to 6 percent slopes Sparta loamy sand, 6 to 12 percent slopes	243C2 244A	St. Charles silt loam, 5 to 10 percent slopes, eroded Hartsburg silty clay loam, 0 to 2 percent slopes	572A	Loran silt loam, 0 to 2 percent slopes
91A	Swygert silty clay loam, 0 to 2 percent slopes	278A	Stronghurst silt loam, 0 to 2 percent slopes	572B	Loran silt loam, 2 to 5 percent slopes
91B	Swygert silty clay loam, 2 to 4 percent slopes	278B	Stronghurst silt loam, 2 to 5 percent slopes	572C2	Loran silt loam, 5 to 10 percent slopes, eroded
91B2	Swygert silty clay loam, 2 to 4 percent slopes, eroded	279B	Rozetta silt loam, 2 to 5 percent slopes	614A	Chenoa silty clay loam, 0 to 2 percent slopes
91C2	Swygert silty clay loam, 4 to 6 percent slopes, eroded	280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	614B	Chenoa silty clay loam, 2 to 5 percent slopes
91C3	Swygert silty clay loam, 4 to 6 percent slopes, severely eroded	290A	Warsaw silt loam, 0 to 2 percent slopes	662B	Barony silt loam, 2 to 5 percent slopes
103A	Houghton muck, 0 to 2 percent slopes	290B	Warsaw silt loam, 2 to 4 percent slopes	663B	Clare silt loam, 2 to 5 percent slopes
104A	Virgil silt loam, 0 to 2 percent slopes	290C2	Warsaw silt loam, 4 to 6 percent slopes, eroded	667B 668B	Kaneville silt loam, 2 to 5 percent slopes
105A	Batavia silt loam, 0 to 2 percent slopes	293A	Andres silt loam, 0 to 2 percent slopes	675B	Somonauk silt loam, 2 to 5 percent slopes Greenbush silt loam, 2 to 5 percent slopes
105B 105C2	Batavia silt loam, 2 to 5 percent slopes Batavia silt loam, 5 to 10 percent slopes, eroded	293B 294B	Andres silt loam, 2 to 5 percent slopes	675C2	Greenbush silt loam, 5 to 10 percent slopes, eroded
105C2 125A	Selma loam, 0 to 2 percent slopes	294B 294C2	Symerton silt loam, 2 to 5 percent slopes Symerton silt loam, 5 to 10 percent slopes, eroded	679B	Blackberry silt loam, 2 to 5 percent slopes
131B	Alvin fine sandy loam, 2 to 5 percent slopes	29402 295A	Mokena silt loam, 0 to 2 percent slopes	680B	Campton silt loam, 2 to 5 percent slopes
131C2	Alvin fine sandy loam, 5 to 10 percent slopes, eroded	295B	Mokena silt loam, 2 to 4 percent slopes	712A	Spaulding silty clay loam, 0 to 2 percent slopes
132A	Starks silt loam, 0 to 2 percent slopes	298B	Beecher silt loam, 2 to 4 percent slopes	715A	Arrowsmith silt loam, 0 to 2 percent slopes
134A	Camden silt loam, 0 to 2 percent slopes	311B	Ritchey silt loam, 2 to 4 percent slopes	732A	Appleriver silt loam, 0 to 2 percent slopes
134B	Camden silt loam, 2 to 5 percent slopes	314A	Joliet silt loam, 0 to 2 percent slopes	732B	Appleriver silt loam, 2 to 5 percent slopes
134C2	Camden silt loam, 5 to 10 percent slopes, eroded	315B	Channahon silt loam, 2 to 4 percent slopes	791A	Rush silt loam, 0 to 2 percent slopes
134D2	Camden silt loam, 10 to 18 percent slopes, eroded	317A	Millsdale silty clay loam, 0 to 2 percent slopes	791B 792A	Rush silt loam, 2 to 4 percent slopes Bowes silt loam, 0 to 2 percent slopes
134D3 134F	Camden silty clay loam, 10 to 18 percent slopes, severely eroded Camden silt loam, 18 to 35 percent slopes	318B 318C2	Lorenzo loam, 2 to 4 percent slopes	792B	Bowes silt loam, 2 to 4 percent slopes
134F 146A	Elliott silt loam, 0 to 2 percent slopes	318C2 320B	Lorenzo loam, 4 to 6 percent slopes, eroded Frankfort silt loam, 2 to 4 percent slopes	794G	Marseilles, Northfield, and Ritchey silt loams, 30 to 60 percent slopes
146B	Elliott silt loam, 2 to 4 percent slopes	320C2	Frankfort silty clay loam, 4 to 6 percent slopes, eroded	802B	Orthents, loamy, undulating
146B2	Elliott silty clay loam, 2 to 4 percent slopes, eroded	325B	Dresden silt loam, 2 to 4 percent slopes	802D	Orthents, loamy, rolling
147B2	Clarence silty clay loam, 2 to 4 percent slopes, eroded	325C2	Dresden silt loam, 4 to 6 percent slopes, eroded	804D	Orthents, acid, undulating and rolling
148A	Proctor silt loam, 0 to 2 percent slopes	327B	Fox silt loam, 2 to 4 percent slopes	804G	Orthents, acid, steep
148B	Proctor silt loam, 2 to 5 percent slopes	327C2	Fox silt loam, 4 to 6 percent slopes, eroded	805B	Orthents, clayey, undulating
148C2	Proctor silt loam, 5 to 10 percent slopes, eroded	327D2	Fox loam, 6 to 12 percent slopes, eroded	814A 817A	Muscatune-Buckhart silt loams, 0 to 3 percent slopes Channahon-Hesch fine sandy loams, 0 to 2 percent slopes
149A 151A	Brenton silt loam, 0 to 2 percent slopes	330A	Peotone silty clay loam, 0 to 2 percent slopes	817B	Channahon-Hesch fine sandy loams, 2 to 6 percent slopes
151A 151B	Ridgeville fine sandy loam, 0 to 2 percent slopes Ridgeville fine sandy loam, 2 to 4 percent slopes	344A 344B	Harvard silt loam, 0 to 2 percent slopes Harvard silt loam, 2 to 5 percent slopes	818A	Flanagan-Catlin silt loams, 0 to 3 percent slopes
151B	Drummer silty clay loam, 0 to 2 percent slopes	344C2	Harvard silt loam, 5 to 10 percent slopes, eroded	820E	Hennepin-Casco complex, 12 to 30 percent slopes
154A	Flanagan silt loam, 0 to 2 percent slopes	356A	Elpaso silty clay loam, 0 to 2 percent slopes	820G	Hennepin-Casco complex, 30 to 60 percent slopes
171A	Catlin silt loam, 0 to 2 percent slopes	375A	Rutland silty clay loam, 0 to 2 percent slopes	830	Landfills
171B	Catlin silt loam, 2 to 5 percent slopes	375B	Rutland silty clay loam, 2 to 5 percent slopes	864	Pits, quarry
171B2	Catlin silt loam, 2 to 5 percent slopes, eroded	375B2	Rutland silty clay loam, 2 to 5 percent slopes, eroded	865	Pits, gravel
171C2	Catlin silt loam, 5 to 10 percent slopes, eroded	388B	Wenona silt loam, 2 to 5 percent slopes	969E2 969F	Casco-Rodman complex, 12 to 20 percent slopes, eroded Casco-Rodman complex, 20 to 30 percent slopes
171C3	Catlin silty clay loam, 5 to 10 percent slopes, severely eroded	388B2	Wenona silt loam, 2 to 5 percent slopes, eroded	1103A	Houghton muck, undrained, 0 to 2 percent slopes
193C2 198A	Mayville silt loam, 5 to 10 percent slopes, eroded Elburn silt loam, 0 to 2 percent slopes	388C2 397F	Wenona silty clay loam, 5 to 10 percent slopes, eroded Boone loamy fine sand, 15 to 35 percent slopes	1480A	Moundprairie silty clay loam, undrained, 0 to 2 percent slopes, frequently flooded
190A 199A	Plano silt loam, 0 to 2 percent slopes	413B	Gale silt loam, 2 to 4 percent slopes	3073A	Ross loam, 0 to 2 percent slopes, frequently flooded
199B	Plano silt loam, 2 to 5 percent slopes	413C2	Gale silt loam, 4 to 6 percent slopes	3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded
199C2	Plano silt loam, 5 to 10 percent slopes, eroded	435A	Streator silty clay loam, 0 to 2 percent slopes	3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded
206A	Thorp silt loam, 0 to 2 percent slopes	448B	Mona silt loam, 2 to 5 percent slopes	3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded
210A	Lena muck, 0 to 2 percent slopes	448C2	Mona silt loam, 5 to 10 percent slopes, eroded	3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded
219A	Millbrook silt loam, 0 to 2 percent slopes	512B	Danabrook silt loam, 2 to 5 percent slopes	3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded
223B	Varna silt loam, 2 to 4 percent slopes	512C2	Danabrook silt loam, 5 to 10 percent slopes, eroded	3480A	Moundprairie silty clay loam, 0 to 2 percent slopes, frequently flooded
223B2	Varna silt loam, 2 to 4 percent slopes, eroded	516A	Faxon loam, 0 to 2 percent slopes	3800A 7073A	Psamments, nearly level, frequently flooded Ross silt loam, 0 to 2 percent slopes, rarely flooded
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	527C2	Kidami loam, 4 to 6 percent slopes, eroded	8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded
223C3 223D2	Varna silty clay loam, 4 to 6 percent slopes, severely eroded Varna silt loam, 6 to 12 percent slopes, eroded	527D2 530B	Kidami loam, 6 to 12 percent slopes, eroded Ozaukee silt loam, 2 to 4 percent slopes	8107A	Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded
223D2 223D3	Varna silty clay loam, 6 to 12 percent slopes, eroded	530C2	Ozaukee siit loam, 4 to 6 percent slopes, eroded	8151A	Ridgeville fine sandy loam, 0 to 2 percent slopes, occasionally flooded
228B	Nappanee silt loam, 2 to 4 percent slopes	530C2 530C3	Ozaukee silty clay loam, 4 to 6 percent slopes, eroded Ozaukee silty clay loam, 4 to 6 percent slopes, severely eroded	8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded
228C2	Nappanee silty clay loam, 4 to 6 percent slopes, eroded	530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded
228C3	Nappanee silty clay loam, 4 to 6 percent slopes, severely eroded	530D3	Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded	8516A	Faxon loam, 0 to 2 percent slopes, occasionally flooded
232A	Ashkum silty clay loam, 0 to 2 percent slopes	530E2	Ozaukee silt loam, 12 to 20 percent slopes, eroded	MW	Miscellaneous water
233A	Birkbeck silt loam, 0 to 2 percent slopes	530F	Ozaukee silt loam, 20 to 30 percent slopes	W	Water
233B	Birkbeck silt loam, 2 to 5 percent slopes				

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

	CULTURAL	FEATURES		SPECIAL SYMBOLS FOR SOI SURVEY AND SSURGO	_
BOUNDARIES		MISCELLANEOUS CULTURAL FEATURI	ES	SOIL DELINEATIONS AND SYMBOLS	21B 86B
National, state, or province		Farmstead, house		LANDFORM FEATURES	
County or parish		Church	±		
Minor civil division		School	1	Bedrock escarpment	
Reservation (national forest or park, state forest or park)		Other Religion	<mark>Mt</mark> ^Carmel	Other than bedrock escarpment	******************
Land grant		Located object	Ranger Station	Short steep slope	
Limit of soil survey (label) and/or denied access area		Tank	Petroleum	Gully	~~~~~
Field sheet matchline & neatline				Depression, closed	♦
Previously Published Survey		Lookout Tower	৷⊼	Sinkhole	♦
OTHER BOUNDARY (label) Airport, airfield		Oil and/or Natural Gas Wells	Δ		
Cemetery		Windmill	ă	PITS	
City/county park		Lighthouse	ħ	Borrow pits	\boxtimes
STATE COORDINATE TICK 1 890 000 FEET				Gravel pit	X
LAND DIVISION CORNER (section and land grants)	L + + +	HYDROGRAPHIC FEA	TURES	Mine or quarry	*
GEOGRAPHIC COORDINATE TICK	+	STREAMS		Landfill	\triangle
TRANSPORTATION		Perennial stream, double line		MISCELLANEOUS SURFACE FEATURES	
Divided roads		Perennial stream, single line	Label only	Blowout	·
Other roads		Intermittent stream	Label only	Clay spot	*
Trail		Drainage end	Label only	Gravelly spot	•••
ROAD EMBLEM AND DESIGNATIONS		DRAINAGE AND IRRIGATION		Lava flow	^
Interstate	173 345	Double-line canal (label)	CANAL	Marsh or swamp	जार
Federal	287 (410) 224	Perennial drainage and/or irrigation	Label only	Rock outcrop (includes sandstone and shall	•
State	52 (52 347)	ditch	l abal aab.	Saline spot	+ ∷:
County, farm or ranch	1283	Intermittent drainage and/or irrigation ditch	Label only	Sandy spot Severely eroded spot	
RAILROAD		SMALL LAKES, PONDS AND RESERVO	IRS	Slide or slip	}
POWERTRANSMISSIONLINE		Perennial water	•	Sodic spot	ø
		Miscellaneous water	©	Spoil area	Ξ
PIPELINE	$\longrightarrow \longmapsto \longmapsto$	Flood pool line	FLOOD POOL LINE	Stony spot	0
FENCE	×		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Very stony spot	00
LEVEES		MISCELLANEOUS WATER FEATURES		Wet spot	Ψ
Without road		Spring	٥~	AD HOC FEATURES	
With road		Well, artesian	•	Calcareous spot	*
With railroad	***************************************	Well, irrigation	~	Disturbed soil spot	**
Single side slope (showing actual feature location)				Muck spot	¤
DAMS					
Medium or Small	W				
LANDFORM FEATURES	\smile				
Prominent hill or peak	‡				





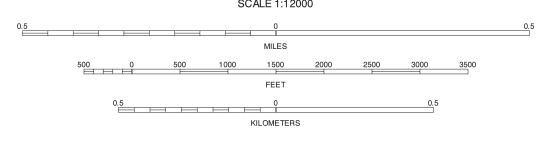


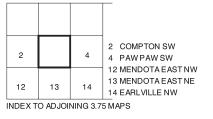
R. 1 E. | R. 2 E. 89° 03′ 45″ 89°00′00″ SCALE 1:12000 This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.

Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994 - 2001 aerial photography. COMPTON SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 3 OF 109

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



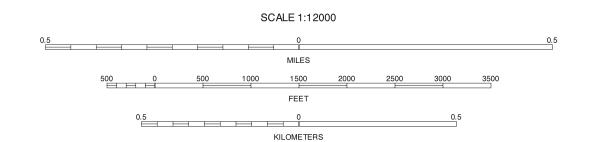


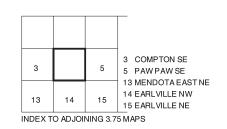


89° 00′00″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



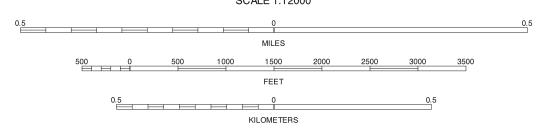




PAW PAW SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 4 OF 109

R. 2 E. | R. 3 E. 88° 56'15"





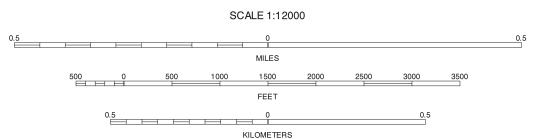


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.

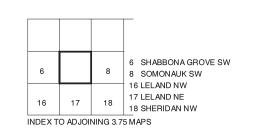
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION



R. 4 E. 352



SHABBONA GROVE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 109

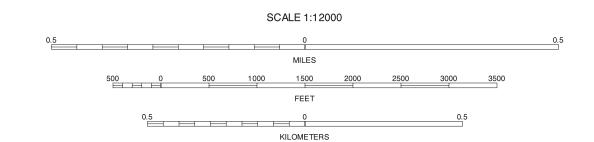
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

88° 45′00″

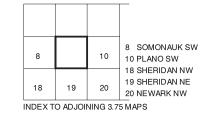
88° 41′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





R. 5 E.



SOMONAUK SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 9 OF 109

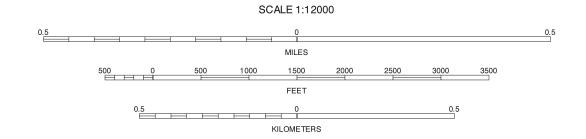
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

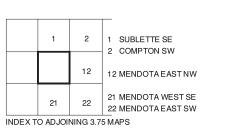
88° 37′30″

89°11′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



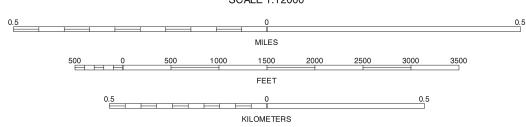


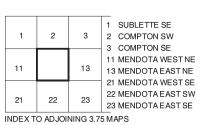


MENDOTA WEST NE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 11 OF 109

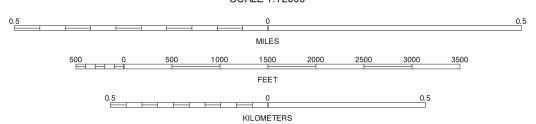
89° 07′ 30″

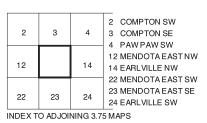
QUARTER QUADRANGLE LOCATION







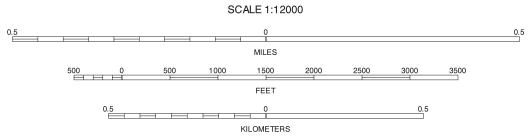


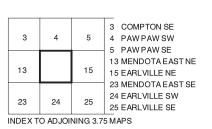


89° 00′ 00″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





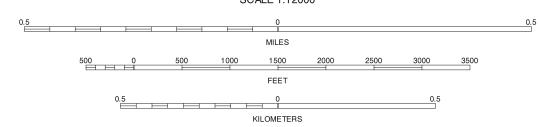


EARLVILLE NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 14 OF 109

88°56′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



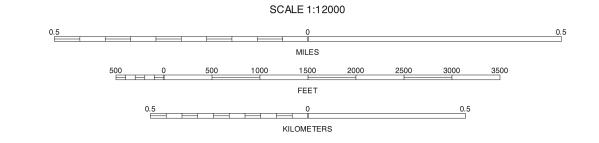




EARLVILLE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 15 OF 109

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







SHERIDAN NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 18 OF 109



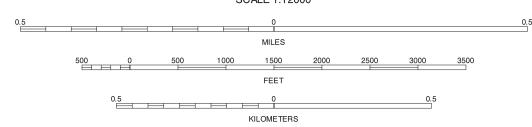
cooperating agencies.

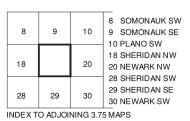
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





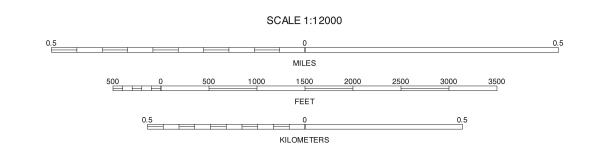


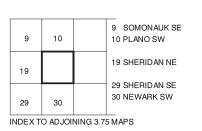
SHEET NUMBER 19 OF 109

88° 37′30″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







NEWARK NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 20 OF 109

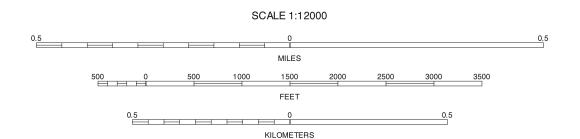
88° 33′ 45″

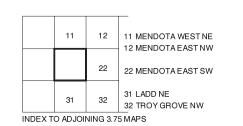
89°11′15″

318 000uE

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







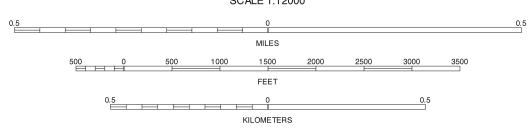
MENDOTA WEST SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 21 OF 109

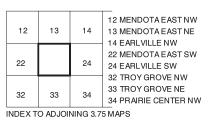
89°07′30″

QUARTER QUADRANGLE LOCATION

approximately positioned. Digital data are available for this quadrangle.

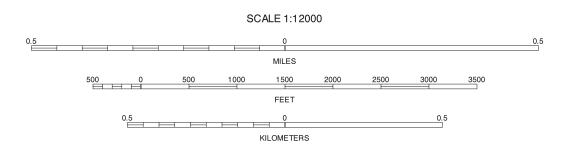
QUARTER QUADRANGLE LOCATION

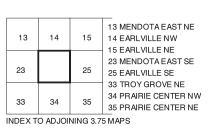




North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



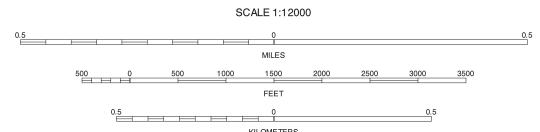


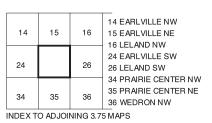


EARLVILLE SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 24 OF 109

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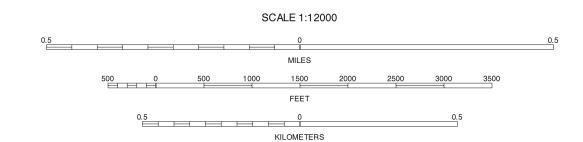


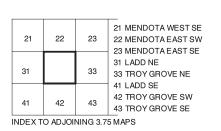


EARLVILLE SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 25 OF 109

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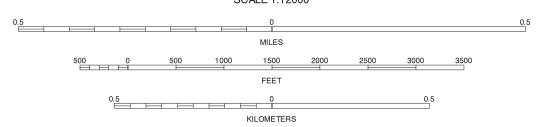


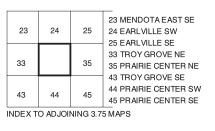




TROY GROVE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 109



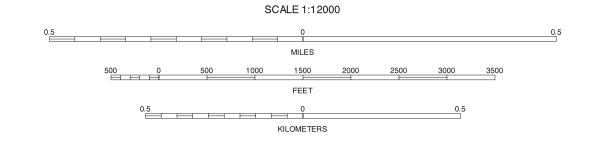


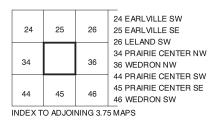


88° 56′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







PRAIRIE CENTER NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 35 OF 109

88°52′30″

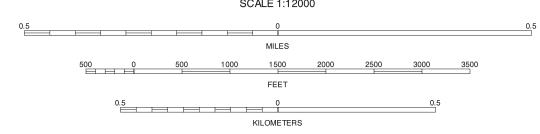
cooperating agencies.

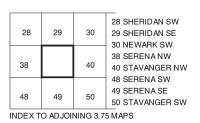
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

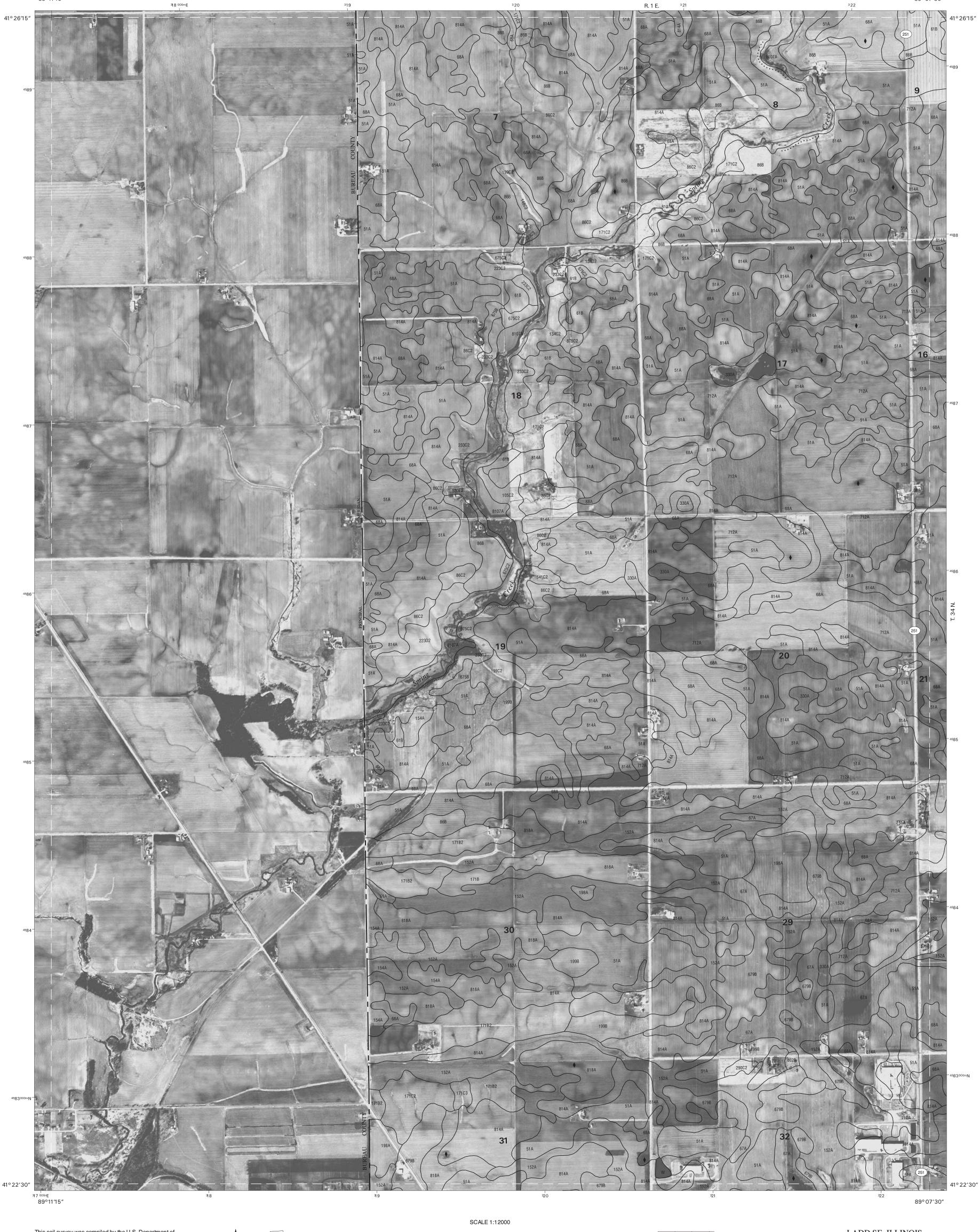
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





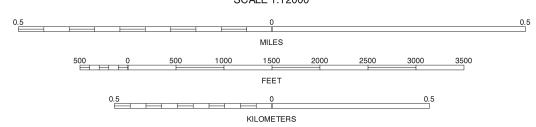


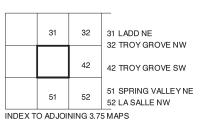
SHEET NUMBER 39 OF 109



North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





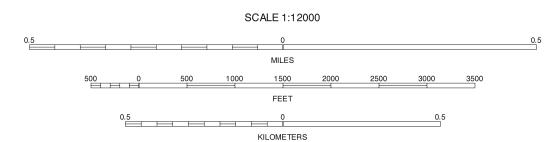


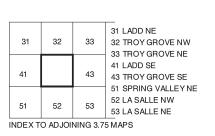
LADD SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 41 OF 109

aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





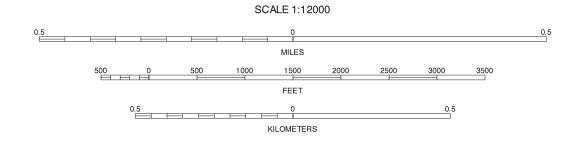


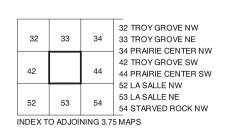
TROY GROVE SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 42 OF 109

89°03′45″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







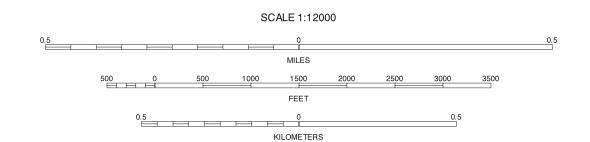
TROY GROVE SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 43 OF 109

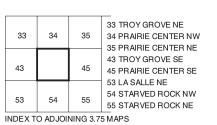
89°00′00″

89° 00′00″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







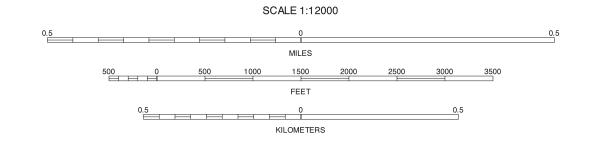
PRAIRIE CENTER SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 44 OF 109

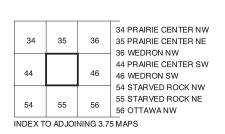
್ವಿ 88° 56′15″

338000mE 88° 56′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







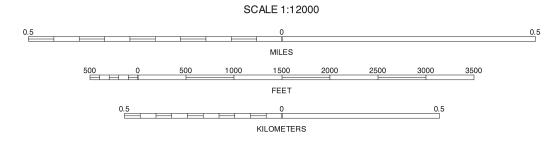
PRAIRIE CENTER SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 45 OF 109

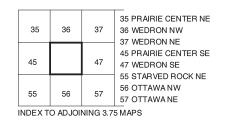
88°52′30″



North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







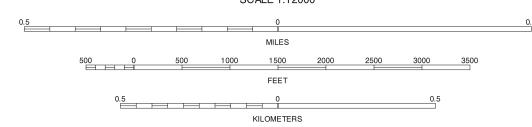
WEDRON SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 46 OF 109

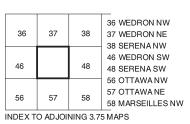


aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







WEDRON SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 47 OF 109

INDEX TO ADJOINING 3.75 MAPS

365 000m E



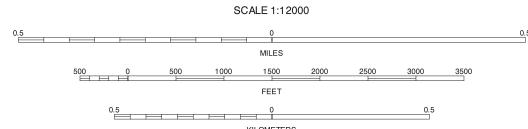
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.

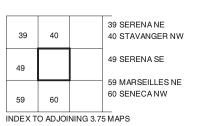
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





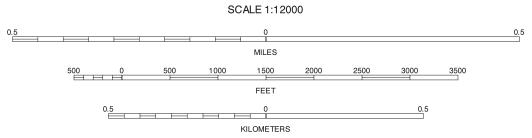


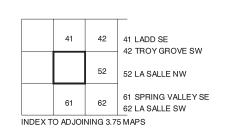
STAVANGER SW, ILLINOIS 3.75 MINUTE SÉRIES SHEET NUMBER 50 OF 109

317 000mE 89°11′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





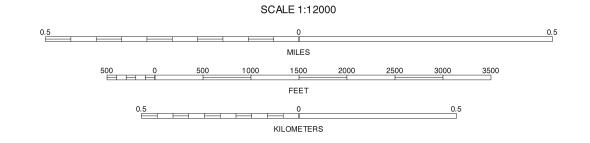


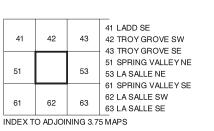
SPRING VALLEY NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 51 OF 109

³²² 89° 07′30″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



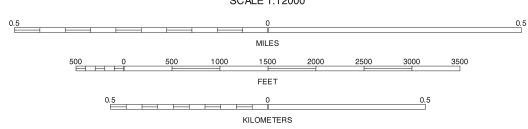


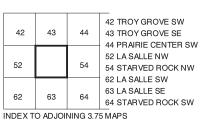


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

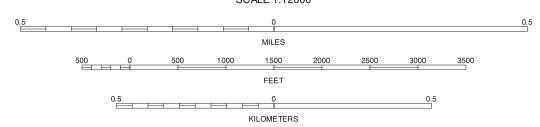
QUARTER QUADRANGLE LOCATION

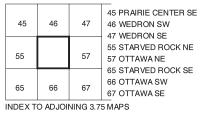




North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



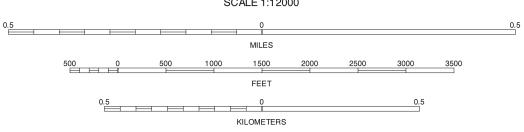


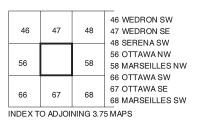


OTTAWA NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 56 OF 109

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







QUARTER QUADRANGLE LOCATION

69 68 MARSEILLES SW 69 MARSEILLES SE

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LA SALLE COUNTY, ILLINOIS

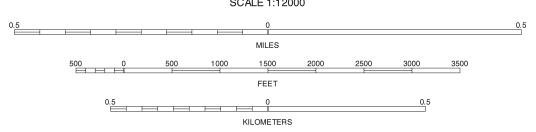
cooperating agencies.

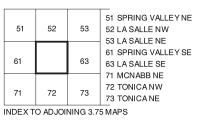
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

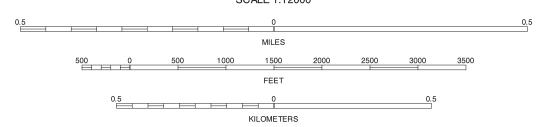


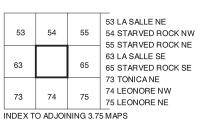




North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







STARVED ROCK SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 64 OF 109

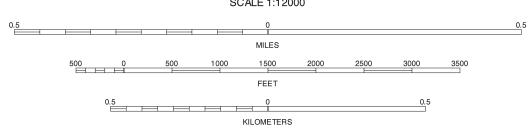
cooperating agencies.

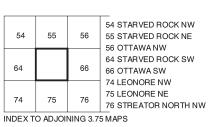
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



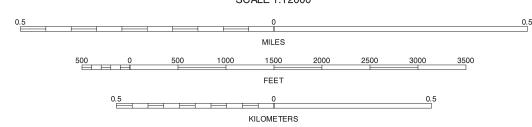


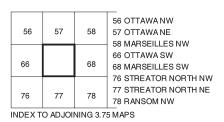


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

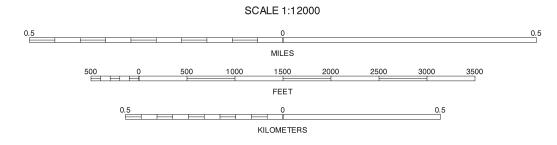


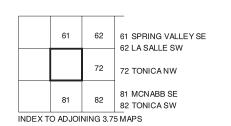




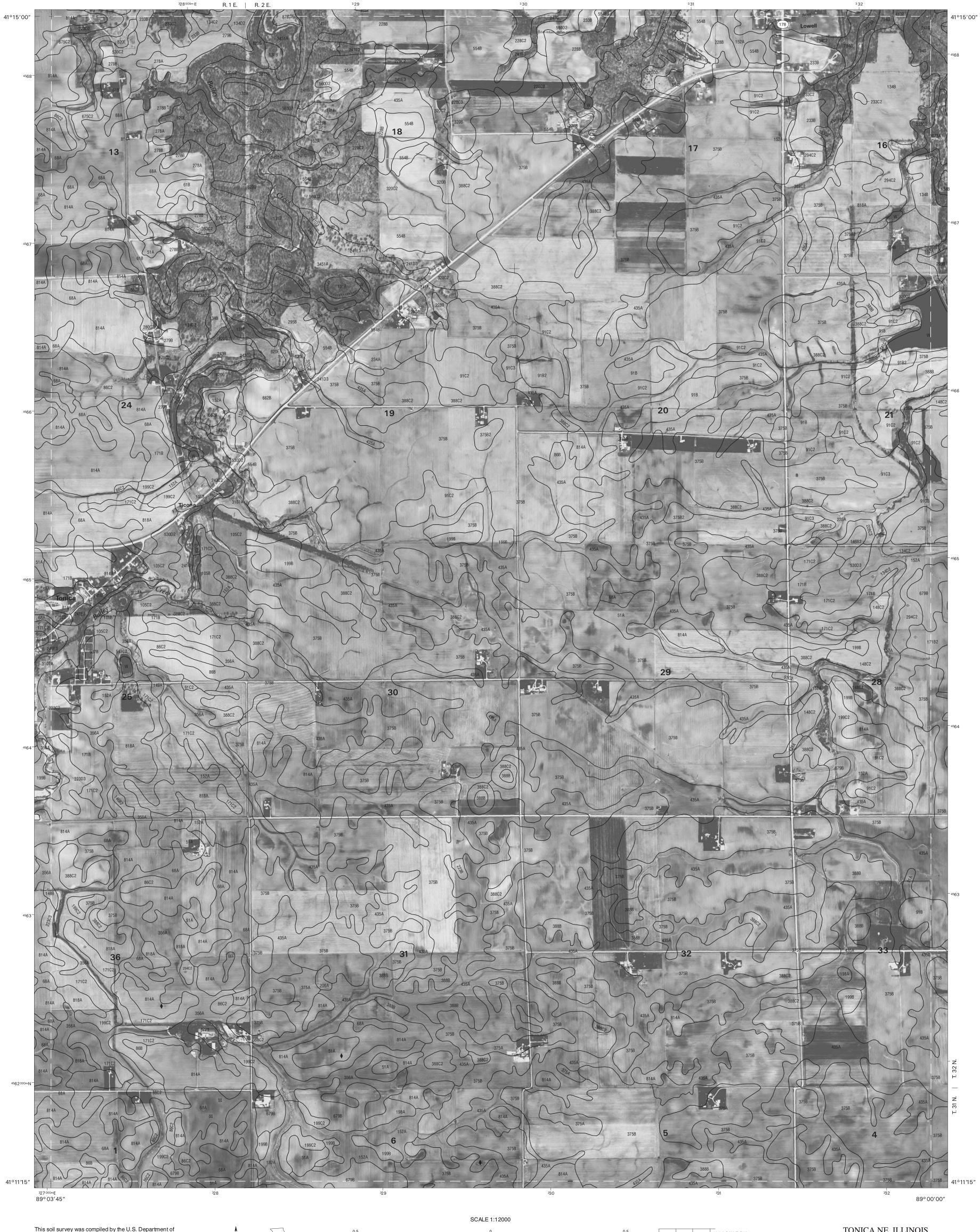
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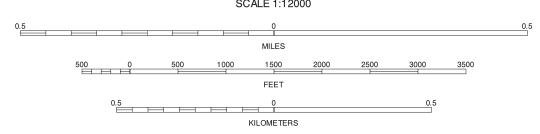


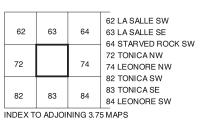
MCNABB NE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 71 OF 109



North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



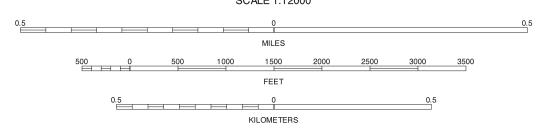


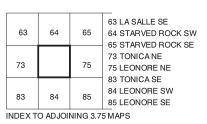


TONICA NE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 73 OF 109

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

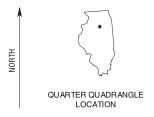


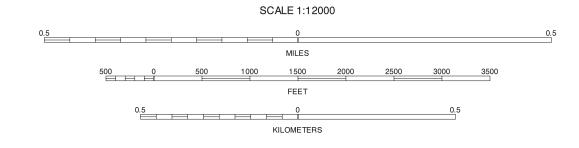


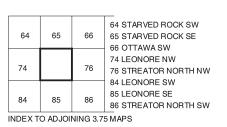


LEONORE NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 74 OF 109

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



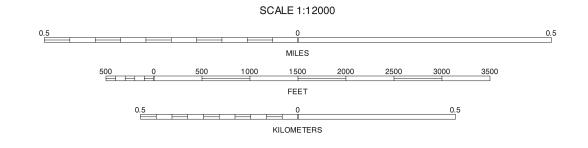


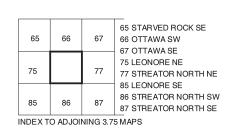


LEONORE NE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 75 OF 109

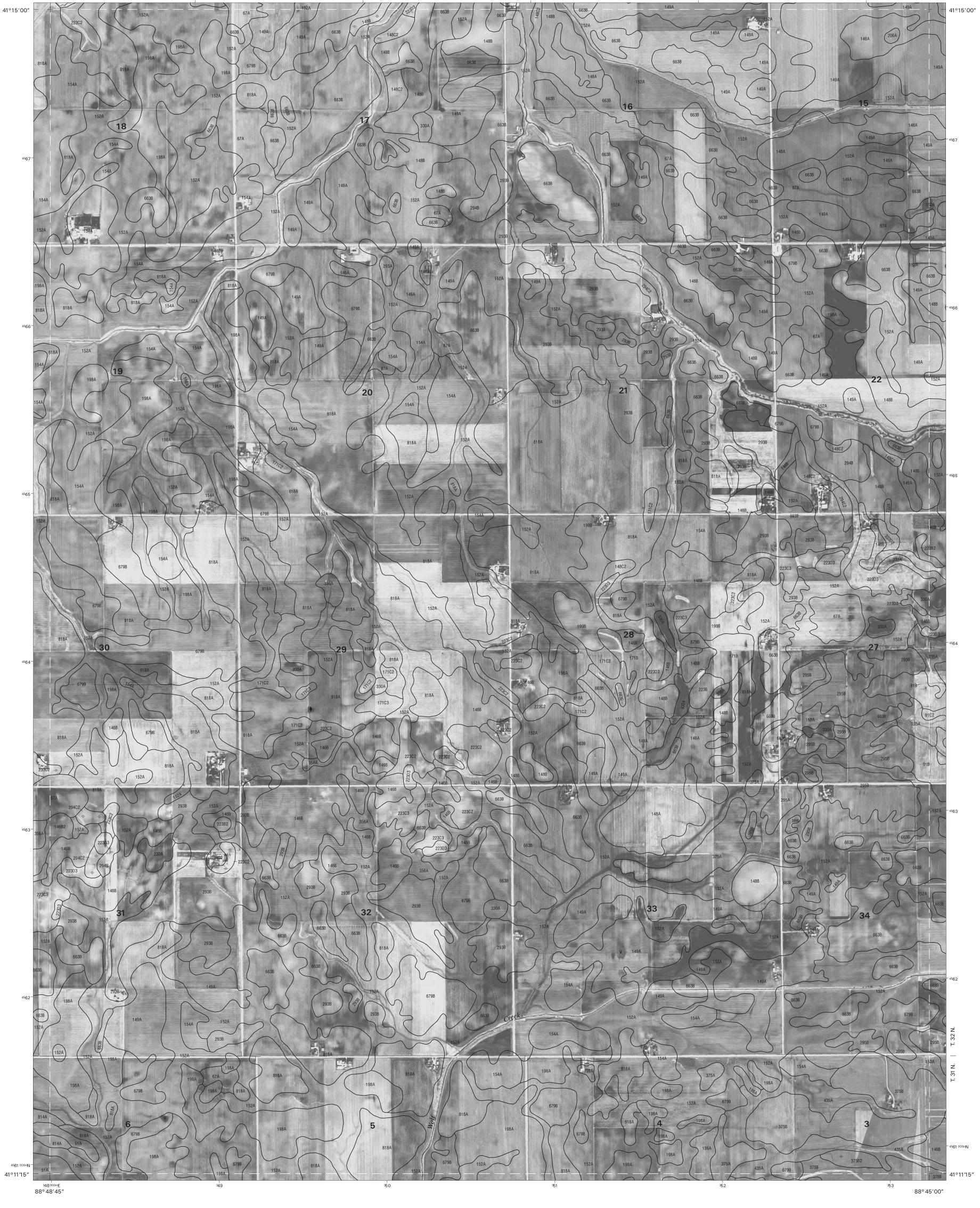
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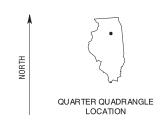


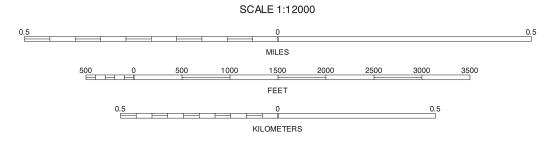


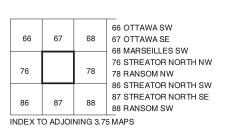
STREATOR NORTH NW, ILLINOIS
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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







STREATOR NORTH NE, ILLINOIS
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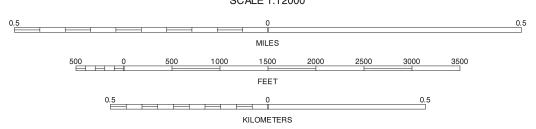
cooperating agencies.

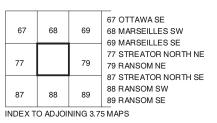
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



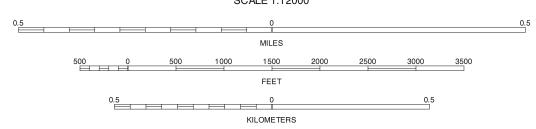


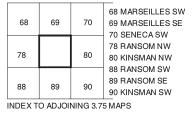


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





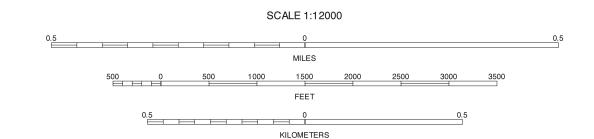


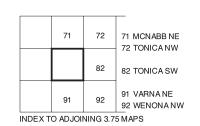
41° 07′ 30″

89°11′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







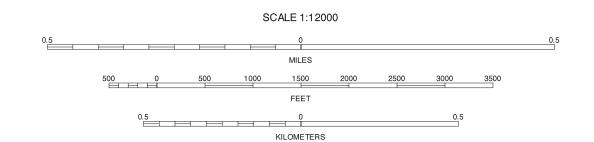
MCNABB SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 81 OF 109

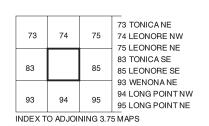
89° 07′30″

89° 00′ 00″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







LEONORE SW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 84 OF 109

88° 56′15″

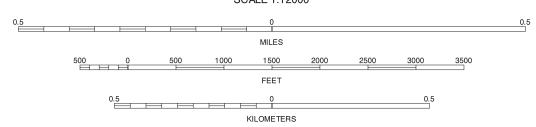
cooperating agencies.

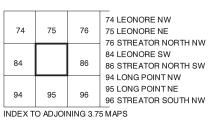
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

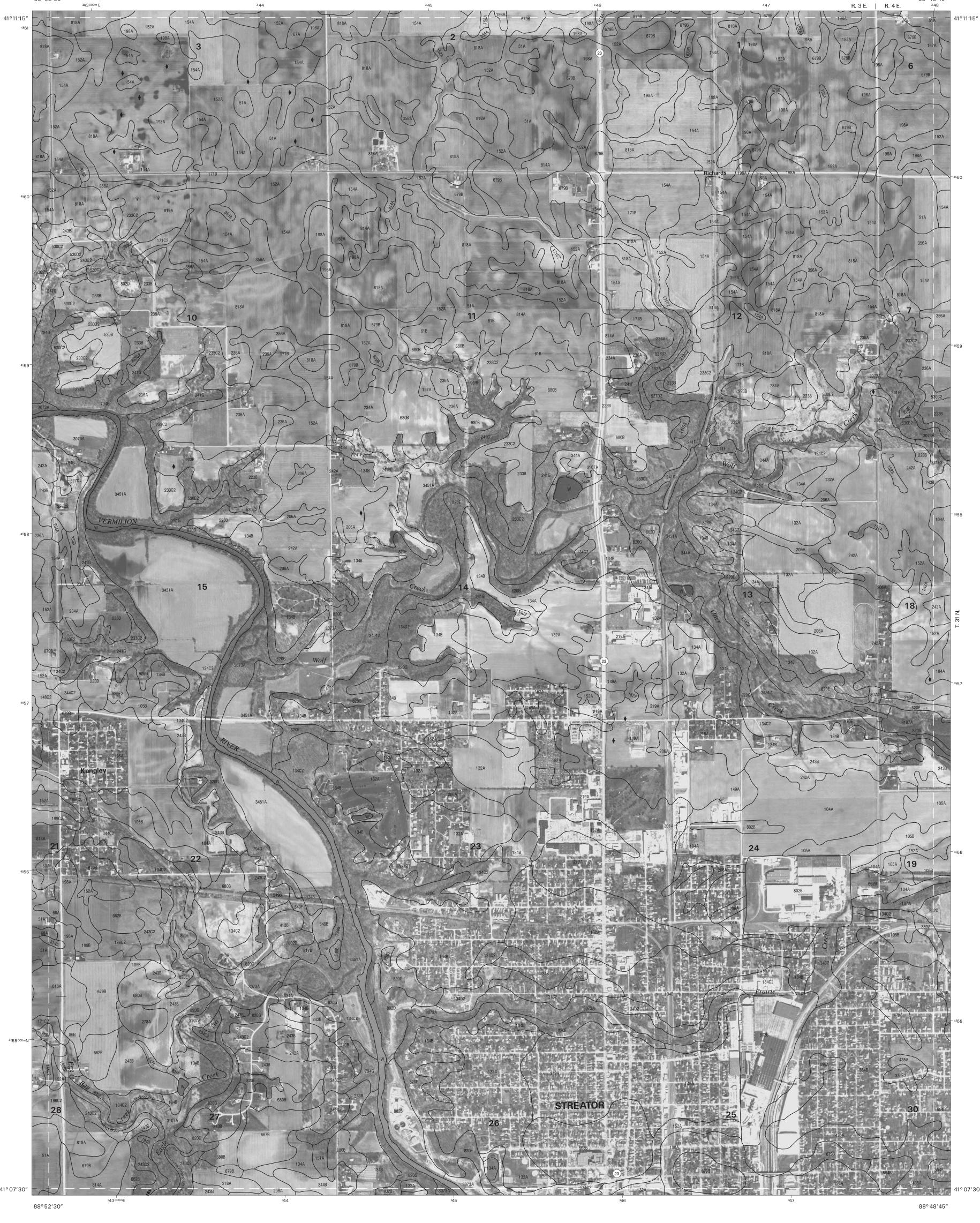
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





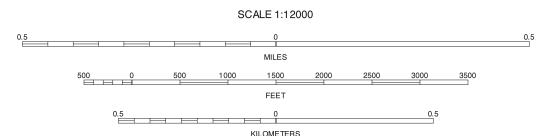


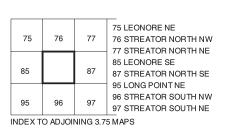
3.75 MINUTE SERIES SHEET NUMBER 85 OF 109



North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







STREATOR NORTH SW, ILLINOIS
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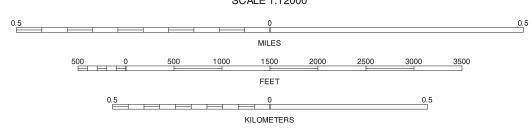
cooperating agencies.

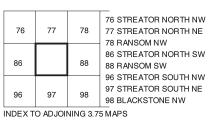
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

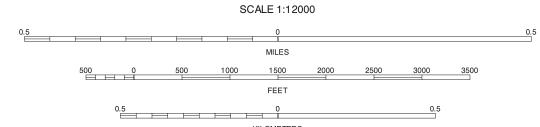


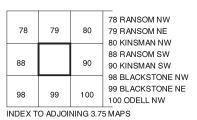




North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







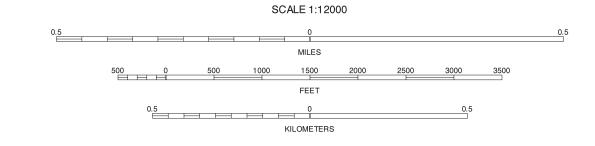
RANSOM SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 89 OF 109

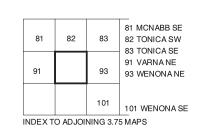
89° 07′30″

322000mE

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





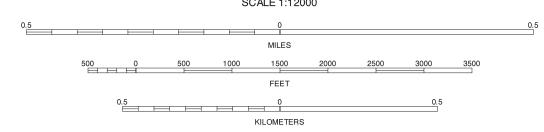


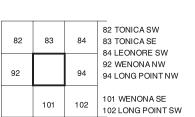
WENONA NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 92 OF 109

89°03′45″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





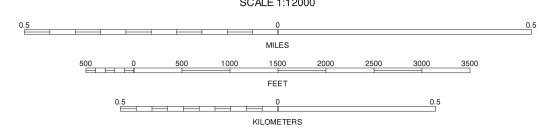


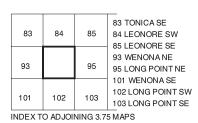
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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







LONG POINT NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 94 OF 109

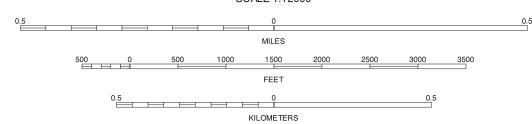
cooperating agencies.

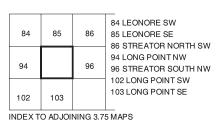
Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





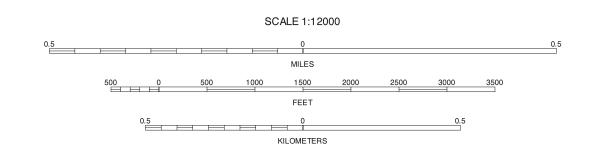


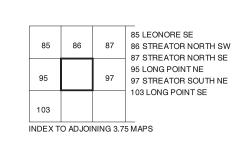


88°52′30″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







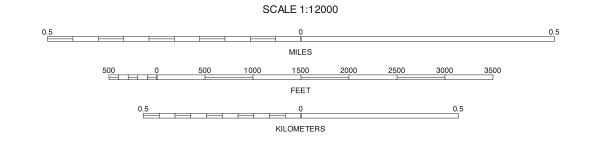
STREATOR SOUTH NW, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 96 OF 109

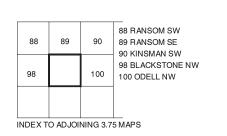
88° 48′ 45″

88° 41′15″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







BLACKSTONE NE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 99 OF 109

88° 37′ 30″

R. 5 E.

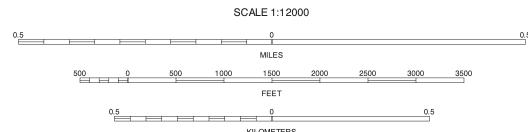


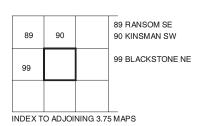
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.

Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





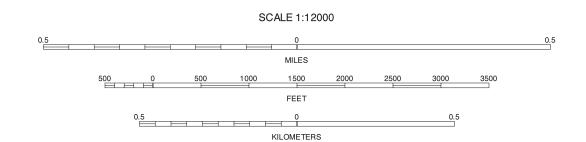


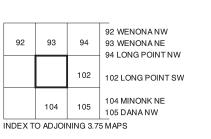
ODELL NW, ILLINOIS
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89° 03′ 45″

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION





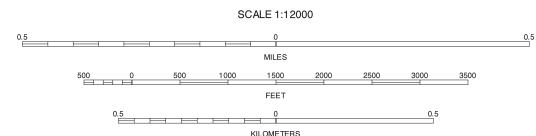
WENONA SE, ILLINOIS 3.75 MINUTE SERIES SHEET NUMBER 101 OF 109

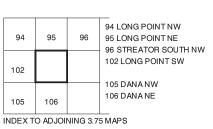
89° 00′ 00″

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

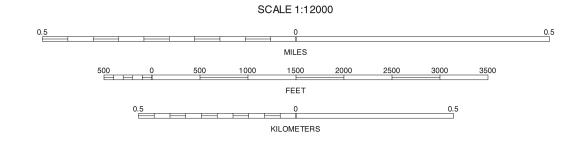


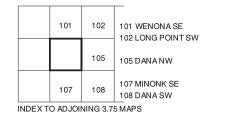


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.







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cooperating agencies.

Base maps are orthophotographs prepared by the U.S.

Department of Interior, Geological Survey, from 1994 - 2001 aerial photography.

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